VIIIth WORLD ECONOMIC CONGRESS
of the
INTERNATIONAL ECONOMIC ASSOCIATION

(1 TO 5 DECEMBER, 86')

VIGYAN BHAWAN

NEW DELHI

THEME 16

Agriculture, Industry and Economic Development in a

Historical Perspective

TUESDAY, 2 DECEMBER, 1986

SESSION ORGANISER

Prof. Paolo Sylos-Labini

THE INDIAN ECONOMIC ASSOCIATION

VIIIth WORLD ECONOMY CONGRESS
OF THE
INTERNATIONAL ECONOMIC ASSOCIATION

THEME-16

AGRICULTURE INDUSTRY AND ECONOMIC DEVELOPMENT IN A HISTORICAL PERSPECTIVE

	AUTHOR	PAPER	PAGE NO.
1	ELTIS, W.	Agriculture, Industry and Economic Development in a Historical Perspective. The Role of Industry in Economic Development, the Contrasting theories of Francois Quesny and Adam Smith.	1- 38
2	FUA, GIORGIO	Small-Scale Industry in Rural Areas: The Italian Experience.	39- 64
3	ALESSANDRO, RONCAGLIA	William Petty and the Conceptual Framework for the Analysis of Economic Development.	65- 91
4	SACHS, I.	Market, Non-Market, Quasi Market and the Real Economy.	92-105
5	ANTONIO VAZQUEZ - BARQUERO	Small Scale Industry in Rural Areas: The Spanish Experience since the Begining of the Century	106-137
6	NARAYANA, D. L.	Agricultural Fundamentalism: A Review of Economic Thought and Development Strategy.	139-175
7	BHARDWAJ, K.	Agriculture Industry Relations in Classical Development Theory.	

COMMUNITY HEALTH CELL
LIBRARY AND INFORMATION CENTRE
BANGALORE

INTERNATIONAL ECONOMIC ASSOCIATION

EIGHTH WORLD CONGRESS

New Delhi, India, 1 - 5 December 1986.

SESSION 16

Agriculture, Industry and Economic Development in a Historical Perspective

THE ROLE OF INDUSTRY IN ECONOMIC DEVELOPMENT: THE CONTRASTING THEORIES OF FRANÇOIS QUESNAY AND ADAM SMITH

by

WALTER ELTIS

Economic Director

National Economic Development Office, London.

THE ROLE OF INDUSTRY IN ECONOMIC DEVELOPMENT: THE CONTRASTING THEORIES OF FRANÇOIS QUESNAY AND ADAM SMITH

WALTER ELTIS[1]

The benefits from industrialization as seen by the great French Physiocrats and Adam Smith were immensely different. François Quesnay argued from 1759 onwards that the industrial sector of the economy was 'sterile', and that state support for industrialization in France in the seventeenth century had reduced population, cut living standards and undermined government finances. Adam Smith insisted just seventeen years later in **The Wealth of Nations** that the benefits from the division of labour which could only be enjoyed in industry had already raised the standard of living of a British labourer above that of an African King. (pp.23-4)

Quesnay and Smith both used rigorously formulated economic argument to arrive at these radically different results. What led Quesnay to his conclusion which astonished his contemporaries no less than subsequent generations of economists was a belief that industry as constituted in France in the seventeenth and eighteenth centuries could make no kind of net contribution to the nation's tax revenues. Its 'net product' [**produit net**], or taxable capacity or economic surplus was zero, which meant that at best, if its support cost the rest of society nothing, it

---

(1) Walter Eltis is Economic Director of the National Economic Development Office, London, and a Fellow of Exeter College, Oxford.

could made no contribution to the military and welfare needs of the State. In less favourable circumstances where industry actually needed to be subsidized or protected, such diversions of real resources would impoverish the primary producing sector which provided the surpluses on which French governments relied. Smith too believed that agriculture had the potential to provide a vastly greater economic surplus than industry, but in his judgement the surplus industry offered was not zero. In addition, industry could be expected to provide external benefits of great importance to the whole economy through the productivity advances associated with the division of labour, though according to Smith, these would be maximized if industrial development was left to market forces.

Virtually all subsequent economists have preferred Smith's analysis to Quesnay's, but there is an important line of argument in Quesnay which several developing countries have overlooked to their cost. This is the proposition that industry fails to provide a taxable surplus comparable to that offered by agriculture. In twentieth century Argentina the agricultural surplus is equivalent to 80% of output, and the state has prevented significant agricultural growth by diverting a high fraction of this surpluses to the support of industries which cannot compete internationally.(2) In Pakistan the value-added

---

(2) See Cavallo and Mundlak (1982) for estimates of the surpluses generated in Argentinian agriculture in the 1960s and the 1970s, the rates at which they were absorbed by the State, and the consequently low levels of agricultural investment and growth.

they allowed corporations with monopoly power to emerge by protecting their own countries' industries. Such policies were prevalent throughout Europe and they had allowed extremely profitable corporations to emerge. And it was also true that industrial innovators could sell at monopoly prices, but these would disappear as soon as others learned to make the same new products. In addition France's great jewellers and furniture makers of the **ancien régime** had temporary monopoly-rights over their distinguished products which allowed them to sell at home and overseas at very high prices which yielded financial surpluses.

Quesnay insisted that any taxable industrial and commercial profits which arose in these ways could only result from such elements of monopoly power, which had the unfortunate effect of diverting a fraction of the true surpluses generated in the primary sector to wealthy industrial and commercial proprietors.

The agricultural surplus is the excess of agricultural output over the costs farmers must meet, and anything which reduces their expenses will increase the surplus as Quesnay explains in the 'Dialogue on the Work of Artisans':

> we have to divide the reproduction generated by the cultivator into two portions, namely, the portion which provides for his own subsistence, and the portion which is in excess of this subsistence. Whence it follows that if it is possible, without detrimentally affecting the total reproduction, to cut down on the first portion, the second will be correspondingly increased. For example, if we assume that the reproduction is 20, the cultivator's

> expenses 10, and the surplus 10, then if the expenses can be cut down to 8 the surplus will be 12. (p.227[M])

The purchase of industrial goods required for the subsistence of labourers are a cost to agriculture. Quesnay explains in the same article how tailors make clothing so that 'the husbandman is not obliged to leave his plough in order to work at making his clothing' and this saving of the husbandman's time increases 'his productive labour' and therefore the rate of surplus in agriculture (226[M]). Increasing the cost of manufactures as a result of protection or monopoly privileges, which permit the generation of industrial profits, will therefore reduce the rate of surplus in agriculture. Part of the agricultural surplus is in effect diverted to monopolist merchants or industrial producers.

The restrictions on competition which make this state of affairs possible divert part of the agricultural surplus to industry or commerce, but the state cannot tax these **de facto** monopoly profits in the same way as the revenue from the agricultural surplus, for according to Quesnay in the 'Dialogue on Commerce', commercial traders:

> know how to keep their profits and protect them from taxation; thus their wealth like the traders themselves has no country; it is unknown, mobile, and dispersed throughout all the countries in which they have dealings, and their true wealth is so confused with debts, active and passive, that it is impossible to evaluate it or assess it for proportional taxation. If their merchandise is taxed, the

expected to yield. These high farmers' profits are part of the 50% of agricultural costs and not the 50% of pure surplus or **produit net** that accrues to landlords and the state.

In industry in contrast there is no taxable surplus, and in conditions of perfect competition [**concurrence libre**], prices cover no more than wage and raw material costs. But the assumed wages of master craftsmen and the owners of manufacturing businesses are set very high in relation to average living standards to enable their incomes to include an element of normal profit to cover risk, trouble and a reasonable return on their capital.(5) Quesnay and Turgot after him took it for granted that the element of extra income of industrial proprietors was not a taxable surplus, for they would gradually cease to manufacture if this element in their rewards was removed.

It is an inevitable consequence of these assumptions of Quesnay's that the financial needs of the state can only be met from the economy's primary producing sector, because only this yields taxable surpluses. But it was nonetheless a notable fact which all including Quesnay recognised that French industrialists and the merchant class that traded their goods often made vast fortunes. His insistence that industry and commerce could not

---

(5) The evidence of the higher incomes of industrial entrepreneurs is set out in Chapter 7 of **Philosophie Rurale**, and summarised in Eltis (1984), pp.12-13. Meek (1962) did not accept that their higher incomes contains an element of normal profit, but Adam Smith who had had the benefit of extensive contacts with the leading Physiocrats in Paris believed it did in his summary of their system in **The Wealth of Nations**, pp.666-7.

support the needs of the state, or finance economic growth and that their production was **sterile** therefore bewildered his contemporaries. These also noticed that manufacturing and commercial states like Venice and Holland had accumulated wealth and power, so how could it possibly be argued that agriculture provided the ultimate source of all wealth and of all net government revenues?

It has always been a mark of the greatest economic thinkers that they can dispute the underlying explanation of facts that are self-evident to the untutored, and Quesnay insisted that taxable industrial and commercial profits could only arise where businesses had managed to achieve elements of monopoly power.(6) This had arisen in Quesnay's Europe in a variety of ways. States frequently granted monopoly privileges to political supporters, or else they sold future monopoly rights for current cash, or

---

(6) Quesnay discusses the relationship between industrial and commercial profits, the degree of competition and the national interest in three important articles which he published in 1766 in the **Journal d'Agriculture** of which the Physiocrat, Du Pont de Nemours was then editor. These are, 'Répétition de la Question Proposée dans la "Gazette du Commerce" au Sujet du Bénéfice que la Fabrique des Bas de Soie Établie à Nîmes Produit à la France', and the two dialogues between Monsieur H. (Quesnay pretending to be an intelligent critic of Physiocracy) and Monsieur N.(Quesnay the Physiocrat), 'Du Commerce', and 'Sur les Travaux des Artisans'. In the passages from these articles quoted below, [M] after a page reference signifies that a translation is by Ronald Meek, and [E] that the responsibility for a translation is mine.

they allowed corporations with monopoly power to emerge by protecting their own countries' industries. Such policies were prevalent throughout Europe and they had allowed extremely profitable corporations to emerge. And it was also true that industrial innovators could sell at monopoly prices, but these would disappear as soon as others learned to make the same new products. In addition France's great jewellers and furniture makers of the **ancien régime** had temporary monopoly-rights over their distinguished products which allowed them to sell at home and overseas at very high prices which yielded financial surpluses.

Quesnay insisted that any taxable industrial and commercial profits which arose in these ways could only result from such elements of monopoly power, which had the unfortunate effect of diverting a fraction of the true surpluses generated in the primary sector to wealthy industrial and commercial proprietors.

The agricultural surplus is the excess of agricultural output over the costs farmers must meet, and anything which reduces their expenses will increase the surplus as Quesnay explains in the 'Dialogue on the Work of Artisans':

> we have to divide the reproduction generated by the cultivator into two portions, namely, the portion which provides for his own subsistence, and the portion which is in excess of this subsistence. Whence it follows that if it is possible, without detrimentally affecting the total reproduction, to cut down on the first portion, the second will be correspondingly increased. For example, if we assume that the reproduction is 20, the cultivator's

> expenses 10, and the surplus 10, then if the expenses can be cut down to 8 the surplus will be 12. (p.227[M])

The purchase of industrial goods required for the subsistence of labourers are a cost to agriculture. Quesnay explains in the same article how tailors make clothing so that 'the husbandman is not obliged to leave his plough in order to work at making his clothing' and this saving of the husbandman's time increases 'his productive labour' and therefore the rate of surplus in agriculture (226[M]). Increasing the cost of manufactures as a result of protection or monopoly privileges, which permit the generation of industrial profits, will therefore reduce the rate of surplus in agriculture. Part of the agricultural surplus is in effect diverted to monopolist merchants or industrial producers.

The restrictions on competition which make this state of affairs possible divert part of the agricultural surplus to industry or commerce, but the state cannot tax these **de facto** monopoly profits in the same way as the revenue from the agricultural surplus, for according to Quesnay in the 'Dialogue on Commerce', commercial traders:

> know how to keep their profits and protect them from taxation; thus their wealth like the traders themselves has no country; it is unknown, mobile, and dispersed throughout all the countries in which they have dealings, and their true wealth is so confused with debts, active and passive, that it is impossible to evaluate it or assess it for proportional taxation. If their merchandise is taxed, the

> taxes will fall equally on domestic and foreign merchants and both will ensure through their sales and their purchases that the taxes fall on the nation ... (p.851[E])

Thus commercial capital is controlled by multinationals (to use a twentieth century label) which are in effect untaxable, and it makes no difference whether these enterprises are nominally domestic or foreign.

Profits of French companies are sometimes made at the expense of foreign countries, but foreign companies will equally gain at the expense of France, as Quesnay explains in the 'Dialogue on Commerce':

> Merchants transport and re-transport, and profit turn by turn in every country ...
> Commercial costs are always paid at the expense of producers, who who would benefit from the full price that purchasers pay if it were not for the expenses of intermediaries ... These costs, it is true, may increase the wealth of the traders who profit from them, but not at all those of the nations which mutually contribute them. Since, once again, the traders do not allow nations to share in their wealth, but they themselves share in the wealth of nations. (pp.835-6[E])

If governments cannot obtain tax revenues from industrial and commercial producers, how are the great City states financed? Quesnay argued in the 'Dialogue on Commerce' that, 'the nations involved in maritime commerce may have a large number of wealthy

merchants, but the State is always poor'.(p.829[E]) Holland is an apparent exception, but Quesnay insists that the Dutch Republic is not merely commercial, 'It is also necessary to envisage it as proprietor of a territory which produces much: of colonies whose produce is extremely profitable to it, and of seas where it obtains a large product through fishing'.(p.852[E])

If the state cannot tax industrial and commercial profits, it can at any rate borrow from wealthy producers and traders, but this has obvious disadvantages as Quesnay makes clear in the 'Dialogue on Commerce':

> to lend is not to give, and it does not even contribute to the needs of the State, and to borrow is no proof of wealth and power in a State ... If you say that it is at least a resource for a nation to have the power to borrow, you should also perceive that this ruinous resource is hardly to the advantage of the nation which provokes the usury of the lender. (p.826[E])

Since the industrial and commercial fortunes which arise from monopoly power and accrue at the expense of the agricultural surplus are difficult to tax and dangerous to borrow, there is an overwhelming case for removing the privileges, and import and

export restrictions, which allowed them to emerge.(7) It is argued powerfully in the 'Dialogue on Artisans' that a nation's overwhelming interest is always:

> to extend commercial competition as far as possible ...
>
> It is only by means of absolute liberty of commerce that the number of domestic and foreign merchants can be multiplied, monopoly be made to disappear, and burdensome costs reduced, nations be assured the highest possible prices in their sales, and the lowest possible prices in their purchases, and thus procure for themselves the most extensive and advantageous commerce they can hope for.(p.858[E])

This will have the added advantage of encouraging the growth of agriculture, for:

> the highest possible price in the sale of your products, and the lowest possible price in the purchase of foreign produce will procure the greatest possible growth for your agriculture, which will then furnish you with the only true and solid means to increase your commerce, your wealth and the enjoyment you derive from it. (p.842[E])

---

(7) Vaggi (1985) emphasises the significance Quesnay attached to the merchant class as an intermediary between agriculturalists and final consumers, which exploits the opportunities open to intermediaries with local monopoly power to deprive producers of some of the real incomes that would otherwise accrue to them.

Once the ideal state of perfect competition in industry and commerce is actually attained, the calculations set out in the **Tableau Économique** show the precise relationship between the output and the rate of return achieved in the surplus-generating and state-financing primary producing sector, and the consequent demand for the products of the industrial and commercial sector that this idealised economy will actually be able to sustain.

The question of the size of the economy's industrial and commercial sector in relation to the agricultural can be examined in two stages. The first and simplest is to examine the relative size of the two sectors in static conditions, and this is found by examining their relative size when the **Tableau Économique** is in stationary state equilibrium. Using the results of the static **Tableau** as a starting point, the dynamic conditions which will produce industrial growth or decline can then be derived.

Industry and commerce will provide employment for a considerable fraction of the population. The effective demand for their produce derives from landlords and the government who are assumed to spend half their incomes on the products of industry and commerce, and farmers who are also assumed to spend half their incomes in the industrial and commercial sector. Quesnay shows that when the full inter-relationships of the **Tableau Économique** are set out and analysed, the aggregate demand for domestically produced industrial and commercial production will total $\frac{1}{2}(A+R)$, where **A** is farmers' total incomes (which also

equals total agricultural costs or advances) and **R** is the agricultural surplus or **produit net**.(8)

If agricultural advances, **A**, yield a return of 100% as in **la grande culture**, **R** the **produit net** will actually equal **A**, so that ½**(A+R)**, the aggregate demand for the output of domestic industry and commerce will actually equal **A**. If the level of agricultural technology is merely that of **la petite culture** where agricultural advances yield no more than 30% to 40% the total **produit net** or aggregate rents will be perhaps one-third of agricultural advances, so **R** will equal no more than **1/3 A** and the aggregate demand for home produced manufactures, ½**(A+R)** will total 2/3 **A**. Hence the demand for manufactures will approximately equal annual agricultural advances with **la grande culture**, but be only two-thirds of these with **la petite culture**.

The level of industrial and commercial employment will therefore depend upon both the level of agricultural investment, and the capital intensity of agricultural technology which determine the rate of surplus in agriculture. That is a summary of Quesnay's static analysis, which explains the size of the industrial and commercial sector in a stationary state. In the formula where industrial production is ½**(A+R)**, anything which raises **A**, the level of agricultural advances, and **R** the

---

(8) The annual advances of the industrial and commercial sector will be half its output and it is stated twice in **Philosophie Rurale** that these advances will indeed total half of ½**(A+R)**, that is ¼**(A+R)**. (Vol.1, pp.124 and 328: the formula is explained in Eltis (1984), pp.27-9 and 37-8).

agricultural surplus or **produit net**, must raise demand for the output of the industrial and commercial sector.

The stationary state equilibrium set out in the static **Tableau** may be disturbed in a number of ways to produce economic growth or decline.

A possibility which concerned Quesnay was that the effective demand of landlords and workers might shift away from agriculture towards industrial products. An extraordinary result he arrived at which has no parallel in modern economics is that if a population wishes to purchase more industrial production, in his words if it acquires a greater taste for **luxe de la décoration**, then the level of industrial production and employment will not increase: **it will actually decline**. This astonishing result follows directly from his assumptions.

Starting from an initial stationary state, if demand shifts away from agriculture and towards industry and commerce, these will receive extra cash flows (as calculated in two series of disequilibrium **Tableaux** which he published(9)) while agricultural producers will receive smaller cash flows than in the previous year. Because the agriculturalists suffer a financial shortfall, the advances or investment for the following year's production that they can afford will be reduced. The industrialists in contrast will receive an initial financial boost because demand shifts in their favour, and they will invest more in order to produce more in the following year. In consequence, in the

---

(9) These are to be found in **Philosophie Rurale**, Vol.III, pp.33-53, and in **l'Ami des Hommes**, Vol VI, pp.192-202. A modern restatement is presented in Eltis (1948), pp.42-9.

second year, agricultural output (which is twice advances) will be lower while industrial production will be higher than before. But only agriculture yields a **produit net**, so if the land yields 100% as with **la grande culture**, each 100 livre fall in agricultural advances will also produce a 100 livre fall in the following year's agricultural surplus. If the landlords accept an immediate and parallel reduction in rents, farmers will achieve a new static equilibrium in which they invest less and produce less (to match the now reduced demand for food) and landlords will receive less rent. But the new situation is not a potential equilibrium redistribution of resources because Quesnay assumes that where the agricultural surplus falls, landlords are at first willing to reduce rents by only half the fall in the agricultural surplus which no one predicted when rent contracts were initially arrived at. Tenant farmers themselves therefore have to meet the other half of the financial loss consequent upon a lower **produit net** until leases come up for renegotiation, perhaps nine years later. This financial loss to tenant farmers will cause them to invest still less in the following year which will reduce the agricultural surplus yet again, but the rents they will have to pay will again be reduced by less than the fall in the **produit net**, so they will be forced to cut their advances still further, and each time they reduce their advances, production will fall in parallel and squeeze rents and farm profits still further. So agriculture will slide downwards indefinitely, falling production levels continually reducing the **produit net**, and contractural rents falling more slowly than the **produit net** with the result that farmers are perpetually short of cash and are therefore obliged to sell off more and more of their

advances instead of being able to invest them in the land to generate future harvests.

The domestic demand for industrial production derives quite largely from landlords spending a fraction of their rents on the products of industry, and farmers spending a fraction of their wages on the industrial side of the **Tableau.** If both these classes are becoming poorer each year, their demand for industrial production will all the time fall. The industrial producers gain in the initial year in which the nation's tastes first move in their favour, and the extra cash flows they then receive enable them to invest and produce more in the second year, but after this, falling demand from agricultural producers and landlords will gradually reduce the domestic market for industrial production. This will be higher than it was originally for perhaps four years, but after that it will gradually decline in parallel with the falling trend in agricultural incomes.

Quesnay explains, correspondingly, that if the nation's tastes switch towards agriculture, industry and commerce will lose out for a few years but the growing agricultural sector will generate extra demand for industrial products which will steadily raise the demand for manufactures from then on. Within a few years the extra markets for manufactures from **A** and **R** which are both growing will more than make good the initial loss.

The formula for the growth (or decline) of agricultural production (δg_a) consequent upon a deviation in the propensity to

consume the products of agriculture of δC_a from the steady state propensity (normally 0.5) can be shown to be:(10)

$$\delta g_a \approx \tfrac{1}{2}\delta C_a - 2/3\ \delta C_a^2$$

Then if C_a rises from 0.5 to 0.6 (so that $\delta C_a = 0.1$), agricultural output (and therefore the effective demand generated from agricultural incomes) will grow at approximately 4.3% per annum. If the propensity to consume food falls from 0.5 to 0.4, agricultural production will decline at an annual rate of approximately 5.67%. When the propensity to consume food first declines from 0.5 to 0.4, the demand for manufactures rises by one-fifth (i.e by 20%) because the propensity to consume manufactured goods increases from 0.5 to 0.6. If agricultural output and hence the effective demand for manufactures then declines at a rate of 5.67%, it will fall below its initial level after four further years, despite the 20% increase at the start.

The logic behind this process is that agriculture generates a **produit net** while industry does not. Every 100 livres of demand that shifts the pattern of production away from industry and towards agriculture therefore generates **an external benefit** of 100 livres to the landlords (or the State where rents are taxed). Similarly, an increase in the demand and supply of manufactures and a corresponding reduction in the output of food has a negative external impact on rents. The lower level of rents then adversely influences the effective demand for manufactures so that industrial producers lose on balance as soon

---

(10) See, Eltis (1984), p. 47.

as this unfavourable **external** effect on the demand for their produce outweighs the initial favourable effect.

The **dynamic** effect in the above processes is due to a lag between the generation of a higher or lower **produit net** and the market fixing of the rents farmers are actually obliged to pay. Where the **produit net** falls, farmers are squeezed because their contractural rents are still based on the formerly higher **produit net**, so output slides downwards. Where the **produit net** rises so that farmers benefit, output will rise from year to year until market determined rents in the end catch up with the rising agricultural surplus. Then, as the agricultural surplus and agricultural advances rise or fall, so will the demand for the products of industry and commerce which is always ½(A+R). Anything at all which produces an unpredicted rise or fall in the agricultural surplus will have these dynamic effects which strongly influence the long-term growth of both agriculture and industry.

Quesnay's own examples focus on the benefits from the establishment of free trade which raises the agricultural surplus and sets off a dynamic expansion of the economy,(11) and the damaging effects on both agriculture and industry of a reduction in the agricultural surplus as a result of the adoption of protectionist policies misguidedly intended to foster industrial

---

(11) Examples are set out in Quesnay's '(Premier) problème économique', and in **Philosophie Rurale**, Vol.II, pp. 354-78, and restated in modern terms in Eltis (1984), pp. 57-61. The principal factors that influence the rate of economic growth in Quesnay's work are explained quite similarly in Barna (1976).

expansion. Quesnay's criticisms are especially levelled at the pro-industrial policies of Louis XIV's great Finance Minister, Colbert, and in his 'Maximes Générales du Gouvernement Économique d'un Royaume Agricole', a vital summary of Physiocratic economics which appears three times in his published work,(12) he outlines the disastrous effects of Colbert's efforts to foster industrialisation, which actually resemble those that many countries have adopted in the twentieth century:

> It will never be forgotten that a minister of the last century, dazzled by the trade of the Dutch and the glitter of luxury manufactures, brought his country to such a state of frenzy that no one talked about anything but trade and money, without reflecting on the true employment of money or on a country's true trade.
>
> This minister, whose good intentions were so worthy of esteem but who was too much a prisoner of his ideas, tried to bring about the generation of wealth from the work of men's hands, to the detriment of the very source of wealth, and put the whole economic constitution of an agricultural nation out of gear. External trade in corn was stopped in order to bring about a low cost of living for the

---

(12) These maxims first appeared in 1757 in the article, 'Grains': a longer version followed in 1759 in the third edition of the **Tableau Économique**, and the full thirty maxims were published in 1767 in the volume of Quesnay's writings, **Physiocratie**, that Du Pont prepared, which reached Adam Smith's library.

manufacturer; and the sale of corn inside the kingdom was subjected to an arbitrary system of regulation which cut off trade between provinces. The protectors of industry, the justices in the towns, in order to procure corn at a low price, ruined their towns and provinces through poor calculation by causing a gradual decline in the cultivation of their land. Everything tended to bring about the destruction of the revenue of landed property, manufactures, trade, and industry, which, in an agricultural nation, can be maintained only through the produce of the soil. For it is this produce which provides trade with a surplus for export, and which pays revenue to the proprietors and wages to the men engaged in remunerative activities ...

Luxury in the way of ornamentation [**luxe de la décoration**] was encouraged, and made very rapid progress. The administration of the provinces, harassed by the needs of the state, no longer offered any security in the countryside for the steady employment of the wealth necessary for the annual reproduction of wealth, which caused a large part of the land to be reduced to small scale cultivation [**la petite culture**], to be left fallow, and to become valueless. The revenue of the proprietors of landed property was uselessly sacrificed to a mercantile trade which could make no contribution to taxes. It became virtually impossible for agriculture to provide for them, depressed and overburdened as it was; their coverage was extended more and more to include men, food, and trade in raw produce; they were increased through the expenses of collection and through the destructive plundering of the

> reproduction; and a system of finance grew up around them which enriched the capital with the spoils of the provinces. Traffic in money lent out at interest created a very important kind of revenue based on money and drawn from money, which from the point of view of the nation was only an imaginary product, eluding taxation and undermining the state. This revenue based on money, and the appearance of opulence, maintained by the splendour of ruinous luxury, imposed upon the vulgar, and reduced further and further the reproduction of real wealth and the money stock of the nation. Unhappily, alas, the causes of this general disorder remained unknown for too long a time (pp.245-6[M])

That passage underlines France's various seventeenth errors in the manner priority was given to industrial development. The attempt to achieve a low cost of living for industrial producers by forcing agriculturalists to sell in the home market reduced agriculture's **produit net**, and therefore its output and the economy's rate of growth. The towns themselves were ruined by the destruction of agriculture in the surrounding countryside. The encouragement of luxury consumption added to the deterioration of agricultural markets. The impoverishment of the agricultural producers reduced the level of agricultural technique from **la grande culture** which yielded a **produit net** equivalent to half of output to **la petite culture** which yielded no more than 25%. The tax-contributing agricultural sector was allowed to decline in relation to the industrial and mercantile sector which yielded no tax revenues, and tax collectors became increasingly desperate to obtain revenues so that methods of

collection became increasingly supply-destructive. In the same General Maxims', Quesnay quotes Boisguilbert's calculations to suggest:

> the revenue from landed property, which was formerly 700 millions (1400 millions in terms of our money today) diminished by one-half between 1660 and 1699. He notes that it is not to the level of taxes but to the injurious form of assessment and the disorder which it brought about that this huge decline must be attributed. ... The assessment became so irregular that under Louis XIV it rose to more than 750 millions but yielded to the royal treasury only 250 millions ... (p.262[M])

The increasing disorder in the nation's finances led to the creation of yet larger untaxable financial fortunes, and raised interest rates, and these higher interest rates then added to the adverse effects on the surplus-producing agricultural sector.

Quesnay's analysis led him towards very simple policy principles which he summarised in the 'Dialogue on Commerce':

> Consumers multiply wherever subsistence expands; but it is only free competition with foreign buyers which can ensure the best possible price, and it is only a high price that can procure and sustain the opulence and the population of a kingdom through success in agriculture. That is the alpha and omega of economic science.(p.824[E])

How Smith's Analysis of the Relationship Between Agriculture and Industry in Economic Development Differed from Quesnay's

Smith's account of the potential benefits from industrialization departs sharply from Quesnay's, but before attention is focused on the differences, it is important to emphasise the common ground between them. Smith spent ten months in Paris in 1765-66 where he discussed economic issues extensively with several of the leading Physiocrats, and in particular with Quesnay himself. The lectures he gave in Glasgow before 1765 include no hint of the close interconnection between capital accumulation and growth which was to play so fundamental a rôle in **The Wealth of Nations**. It has been inferred that he owed his grasp of this to the thorough grounding in Quesnaysian economics he acquired in 1765-66.(13) The editors of the Glasgow edition of **The Wealth of Nations** have commented that 'the model [of Physiocracy] which Smith expounds [in Book IV Chapter 9] is rather more elaborate than that offered by Quesnay' (pp.672-3), which underlines how much he learned during this Paris visit.

The first fundamental issue where Smith's analysis follows Quesnay's is his agreement with the proposition that agriculture offers a far larger taxable and investable surplus than industry:

> The labourers and labouring cattle, therefore, employed in agriculture, not only occasion like the workmen in manufactures, the reproduction of a value equal to their own consumption, or to the capital which employs them, together

---

(13) That view has been expressed by Skinner (1979), Chapter 5.

> with its owner's profits; but of a much greater value. Over and above the capital of the farmer and all its profits, they regularly occasion the reproduction of the rent of the landlord. (pp. 363-4)

Smith thus agrees with Quesnay and the Physiocrats that extra agricultural demand and production provide the **external benefit** that unlike industrial production they raise aggregate rents. Because agricultural production adds to rents while industrial production does not, increments to agricultural production will have more potential to finance the needs of the State than equal increments to industrial production. The Ricardian theory of rent, originated by Malthus, West and Ricardo in 1815, insisted that this line of argument of Quesnay's and Smith's was incorrect. If, as the Ricardian theory insisted, marginal land yields no rent, a **marginal increment** to agricultural production will add no more to aggregate output than the increase in wages and profits that it generates, and precisely the same is true of manufacturing. Ricardo therefore inisted that there is no reason to suppose expanding agriculture will generate more 'revenue' [profits plus rents in his analysis] than an equal expansion of industry.(14) On this issue, Smith's position was identical to Quesnay's, and the Ricardians found them equally in error.

There is a further vital issue on which Smith and Quesnay were in complete agreement. Both wholly supported free trade

---

(14) His objections are developed in Ricardo (1817), Chapter 26. Hollander (1973) pp. 195 and 280-7, has also strongly criticised Smith here.

and the maximization of international competition, and they saw the benefits from these in very similar terms. Smith's position is better known than Quesnay's, and a very well-known passage from The Wealth of Nations in juxtaposition to a similar passage from Quesnay's 'Dialogue on the Work of Artisans' will underline the similarity of their reasoning. First Smith:

> every system which endeavours, either, by extraordinary encouragements, to draw towards a particular species of industry a greater share of the capital of the society than would naturally go to it; or, by extraordinary restraints, to force from a particular species of industry some share of the capital which would otherwise be employed in it, is in reality subversive of the great purpose which it means to promote. It retards, instead of accelerating, the progress of the society towards real wealth and greatness; and diminishes, instead of increasing, the real value of the annual produce of its land and labour.
>
> All systems either of preference or of restraint, therefore, being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord. Every man, as long as he does not violate the laws of justice, is left perfectly free to pursue his own interest his own way, and to bring both his industry and capital into competition with those of any other man, or order of men. (p. 687)

And now Quesnay:

> You will come round again to the necessity of accepting the greatest possible freedom of competition in all branches of trade, in order to cut down as far as possible on the burdensome costs involved in them. As soon as you have calculated the effects of this general freedom prescribed by natural right, by virtue of which **each person should have the legal power to render his situation as good as he possibly can, without infringing upon the rights of others**, it will become self-evident to you that it is an essential condition of the growth of public and private wealth. (p.229[M])

Despite this identity of argument on the desirability of a system of natural liberty in industry and commerce, where all should be equally free to buy in the cheapest market and sell in the dearest; and also their agreement that agricultural expansion offers the largest potential economic surplus, Smith believed that there were significant errors in Quesnay's analysis. But the extent of their agreement should not be underrated. Smith said that Quesnay's system, 'with all its imperfections is, perhaps, the nearest approximation to the truth that has yet been published upon the subject of political economy'. (p.678)

The first important difference between Smith and Quesnay is that Smith believed industrial profits include an element of economic surplus in the sense that industrial capitalists can save and invest from their profits, with the result that they have the potential to add to the growth of the economy:

> The increase in the quantity of useful labour actually employed within any society, must depend altogether upon the increase of the capital which employs it; and the increase of that capital again must be exactly equal to the amount of the savings from the revenue, either of the particular persons who manage and direct the employment of that capital, or of some other persons who lend it to them. If merchants, artificers and manufacturers are, as this system [Quesnay's] seems to suppose, naturally more inclined to parsimony and saving than proprietors and cultivators, they are, so far, more likely to augment the quantity of useful labour employed within their society, and consequently to increase its real revenue, the annual produce of its land and labour. (p.677)

It was extremely prescient of Smith to appreciate that merchants and manufacturers have the power (and the inclination) to save some of the ordinary or 'normal' profits which accrue to them in conditions of perfect competition. That merchants and manufacturers have the power to raise the rate of growth through their saving does not necessarily signify that they will generate a taxable surplus. A sufficient profit to leave something over for potential saving may be a necessary condition for the investment of private capital in industry and commerce, so profits sufficient to enable individuals to save may be part of the supply price of manufactures. But it does not follow that any part of these profits will necessarily be available to the State for a lower net of tax return could discourage the supply of industrial capital. Smith does not actually discuss Quesnay's

proposition that industry and commerce fail to generate a taxable surplus, but the history of the next century underlines that the industrial surplus soon became large enough to generate substantial tax revenues in addition to private saving. By the time the first volume Karl Marx's Capital (1867) was published, industrial and commercial profits amounted to 30% of Britain's gross domestic product and agricultural rents plus the profits generated in agriculture amounted to no more than 13%.(15) So within a century, Britain's industrial and commercial surpluses were to become vastly larger than the agricultural. Smith's analysis was compatible with this development, but not Quesnay's.

Smith's main objection to Quesnay's argument is of course its neglect of the enormous advantages a society can obtain from the division of labour which can be taken far further in industry than in agriculture, for 'the labour of artificers and manufacturers ... is capable of being more subdivided, and the labour of each workman reduced to a greater simplicity of operation, than that of farmers and country labourers'. (p.676) Because of these potential advantages:

> A small quantity of manufactured produce purchases a great quantity of rude produce. A trading and manufacturing country, therefore, naturally purchases with a small part of its manufactured produce a great part of the rude produce of other countries; while, on the contrary, a country without trade and manufactures is generally obliged to purchase, at the expence of a great part of its rude produce, a very

---

(15) Matthews, Feinstein and Odling-Smee (1982), p.164.

> small part of the manufactured produce of other countries. (p. 677)

So Smith argues that a country which successfully develops its industry can attain far more favourable terms of trade between agricultural produce and manufactures than one that is still without a substantial industrial sector. Smith formulated the benefits from the division of labour in industry so that each expansion in industrial employment leads to more extensive subdivisions of employment, and hence to the achievement of higher productivity through the invention of superior machinery to exploit the opportunities this offers:

> What takes place among the labourers in a particular workhouse, takes place, for the same reason, among those of a great society. The greater their number, the more they naturally divide themselves into different classes and subdivisions of employment. More heads are occupied in inventing the most proper machinery for executing the work of each, and it is, therefore, more likely to be invented. (p.104)

The proposition that industrial productivity will be higher the more extensive the division of labour was present in lectures Smith gave in Glasgow just before and immediately after his Paris visit, where different students have recorded his words as, 'Twenty millions of people perhaps in a great society, working as it were to one anothers hands, from the nature of the division of labour before explained would produce a thousand times more goods

than another society consisting only of two or three millions and 'For twenty millions in a society, in the same manner as a company of manufacturers, will produce a hundred times more goods to be exchanged than a poorer and less numerous one of 2 mill'.(16) As industrial employment grows and the division of labour is extended, industrial productivity will continually increase, so the quantity of production of each industrial worker will all the time rise. If the relative price of manufactures does not fall entirely in line with this continuing increase in industrial productivity, the amount of corn the product of a manufacturing worker can be traded for will all the time rise. Thus if manufacturing productivity grows at a rate of 2% a year, and the relative prices of manufactures fall only 1% per annum, while agricultural productivity and the price of corn are constant, the output of a manufacturing worker will be tradable for 1% more corn in each successive year. Hence the basis for Smith's statement that '[A trading and manufacturing country] exports what can subsist and accommodate but a very few, and imports the subsistence and accommodation of a great number'. (p.677)

The country that succeeds in expanding its manufacturing employment sufficiently to achieve the highest productivity levels and the greatest terms of trade benefits implicitly faces only modest competition from other manufacturing countries, so it will be able to reduce the relative prices of its manufactures less than the annual advance in its relative productivity. In

---

(16) These are reprinted in Lectures on Jurisprudence, pp.392 and 512.

Smith's argument, other countries will only achieve matching industrial productivity if they can attain comparable employment and production levels, so those who first attain high industrial production and efficiency will enjoy advantages which will not be readily competed away in the manner Quesnay assumed throughout his analysis of the tendency of competition to eliminate industrial profits.

The logic of Smith's argument indicates that a country with inferior industrial output and productivity might be able to compete with its more efficient competitors if it could pass through an initial loss making phase as it expands its industrial production to their levels. Its companies could only survive these losses if, during the interval in which they were still inefficient owing to an inadequate scale of production, they were protected from the competition of overseas industries which had already attained high output and productivity. Smith discussed this case for infant industry protection which followed so directly from the logic of his argument:

> By means of such regulations, indeed, a particular manufacture may sometimes be acquired sooner than it could have been otherwise, and after a certain time may be made at home as cheap or cheaper than in the foreign country. But though the industry of the society may be thus carried with advantage into a particular channel sooner than it could have been otherwise, it will by no means follow that the sum total, either of its industry, or of its revenue, can ever be augmented by any such regulation. The industry of the society can augment only in proportion as its capital

augments, and its capital can augment only in proportion to what can be gradually saved out of its revenue. But the immediate effect of every such regulation is to diminish its revenue, and what diminishes its revenue, is certainly not very likely to augment its capital faster than it would have augmented of its own accord, had both capital and industry been left to find out their natural employments.

Though for want of such regulations the society should never acquire the proposed manufacture, it would not, upon that account, necessarily be the poorer in any one period of its duration. In every period of its duration its whole capital and industry might still have been employed, though upon different objects, in the manner that was most advantageous at the time. In every period its revenue might have been the greatest which its capital could afford, and both capital and revenue might have been augmented with the greatest possible rapidity. (p.458)

In Smith's argument an extensive scale of production and a large capital stock are both necessary if high levels of industrial efficiency and employment are to be attained. Infant industry protection can create a large captive home market, but by reducing the economy's overall net revenue, or **produit net** as Quesnay described it, protection actually reduces the economy's capacity to expand the capital stock and therefore to take advantage of its new found opportunities for industrial growth.

So while Smith saw far greater benefits from the growth of manufacturing industry than Quesnay, he entirely agreed that the State should not interfere with market forces to further

industrial growth. The very different analyses of Smith and Quesnay therefore indicate an identical policy stance.

Conclusion

Since the Second World War, Hong Kong, Taiwan, South Korea and Singapore have followed policies extremely close to those Smith and Quesnay advocated,(17) while the countries of the Indian sub-Continent have preferred to pursue Colbertian policies involving massive tariff protection, industrial subsidies, agricultural price controls, and the diversion of agricultural surpluses in order to seek to build up industry.

The theory of infant industry protection and of the potential external benefits from industrial development have advanced greatly since 1776, but the eighteenth century propositions of Smith and Quesnay that these policies will not actually assist long-term industrial development pose questions which twentieth century economists cannot safely lose sight of.

The first questions are raised by the line of argument which is most powerfully present in Quesnay's work. This focuses attention on the taxable surplus or **produit net** that industry and agriculture generate. Quesnay was of course wrong to suppose that only agriculture generates a **produit net**, but the question still needs to be asked of countries which have devoted vast real resources to industrial growth: Is industry a net generator of

---

(17) The policies these countries have pursued are set out and discussed in detail in Chen (1979).

funds capable of supporting government defence and welfare spending, or is it actually a net absorber of such funds? Is industry capable of supporting social welfare, or is it a part of the welfare system that the sectors which are truly surplus-generating are required to finance?(18)

A second vital question is raised most sharply by Smith's analysis: Have pro-industrial policies actually raised or alternatively have they perhaps reduced the long-term rate of capital accumulation? If they transitorily reduce the gross national product because they force the substitution of low (or even negative) value-added production (when measured at world market prices) for production which offers a higher value-added, then the probability is that there will be less saving and capital accumulation from this lower real national income. If saving and capital accumulation are diminished in the short-term, does the evidence indicate that long-term capital accumulation is truly raised as the advocates of twentieth century Colbertian policies invariably suppose?

It certainly appears that the questions raised by the eighteenth century analyses of François Quesnay and Adam Smith may still be pertinent to the development policies of several countries in the Third World.

---

(18) It is shown in Eltis (1979) that even in a country with industries as advanced as Britain's, the nationalized industries were for many years part of the welfare state which the rest of the economy had to finance from its surpluses, instead of generating real resources to provide the wherewithal to finance social welfare.

REFERENCES

Barna, Tibor (1976) 'Quesnay's Model of Economic Development' **European Economic Review**, Vol.8.

Boisguilbert, Pierre de,(1707) **Le Détail de la France** (Paris). Reprinted in **Pierre de Boisguilbert ou la Naissance de l'Économie Politique**, 2 Vols, (Paris: Institut National d'Etudes Démographiques.

Cavallo, Domingo and Yair Mudlank (1982) **Agriculture and Economic Growth in an Open Economy: The Case of Argentina** (Washington: International Food Policy Research Institute).

Chen, Edward K.Y. (1979) **Hyper-Growth in Asian Economies: A Comparative Study of Hong Kong, Japan, Korea, Singapore and Taiwan** (London: Macmillan).

Eltis, Walter (1979) 'The True Deficits of the Public Corporations', **Lloyds Bank Review**, January.

Eltis, Walter (1984) **The Classical Theory of Economic Growth** (London: Macmillan).

Hollander, Samuel (1973) **The Economics of Adam Smith** (Toronto: University Press).

Little, Ian, Tibor Skitovsky and Maurice Scott (1970) **Industry and Trade in Some Developing Countries** (Oxford: University Press for OECD).

Malthus, T.R. (1815) **An Inquiry into the Nature and Progress of Rent** (London).

Marx, Karl (1867-83) **Capital**, 3 Vols. Reprinted (Moscow: Progress Publishers for Lawrence and Wishart).

Matthews, R.C.O., C.H. Feinstein and J.C. Odling-Smee (1982)

British Economic Growth, 1856-1973 (Oxford: University Press).

Meek, Ronald L. (1962) **The Economics of Physiocracy** (London: Allen & Unwin).

Quesnay, François (1756) 'Fermiers'. Reprinted in L. Salleron (ed.), **François Quesnay et la Physiocratie** (1958), 2 Vols, (Paris: Institut National d'Etudes Démographiques) [Abbreviated below as INED].

Quesnay, François (1757) 'Grains'. Reprinted in INED.

Quesnay, François (1758-9) **Tableau Économique**, Three Editions in 1758-9. Republished and translated in Marguerite Kuczynski and Ronald L. Meek (eds) (1972) **Quesnay's Tableau Économique** (London: Macmillan).

Quesnay, François (1756-60) with Victor de Riqueti, Marquis de Mirabeau, **L'Ami des Hommes**, 6 Vols. Reprinted (1972) (Scientia Verlag Aalen).

Quesnay, François with Victor Riqueti, Marquis de Mirabeau (1763) **Philosophie Rurale**, 3 Vols. Reprinted (1972) (Scientia Verklag Aalen).

Quesnay, François (1766) 'Répétition de la Question Proposée dans la "Gazette du Commerce" au Sujet du Bénéfice que la Fabrique des Bas de Soie Établie à Nîmes Produit à la France'. Reprinted in INED.

Quesnay, François (1766) 'Dialogue entre M. H. et M.N. 'Du Commerce". Reprinted in INED.

Quesnay, François (1766) '(Premier) Problème Économique'. Reprinted in INED.

Quesnay, François (1766) 'Second Dialogue sur les Travaux des Artisans'. Reprinted and translated in Meek (1962).

Quesnay, François (1767) **Physiocratie, ou Constitution Naturelle du Gouvernement le Plus Advantageux au Genre Humain**.

Quesnay, François (1767) 'Maximes Générales du Gouvernement d'un Royaume Agricole'. Reprinted and translated in Meek (1962).

Ricardo, David (1815) **On The Influence of a Low Price of Corn on the Profits of Stock** (London).

Ricardo, David (1817) **On The Principles of Political Economy and Taxation** (London).

Skinner, A.S. (1979) **A System of Social Science: Papers Relating to Adam Smith** (Oxford: University Press).

Smith, Adam (1776) **An Inquiry into the Nature and Causes of the Wealth of Nations**, 2 Vols (London). Republished, R.H. Campbell, A.S. Skinner and W.B. Todd (eds) (1976) 2 Vols, as II of **The Glasgow Edition of the Works and Correspondence of Adam Smith** (Oxford: University Press).

Smith, Adam **Lectures on Jurisprudence**, delivered in 1762-3 and 1766. R.L. Meek, D.D. Raphael and P.G. Stein (eds) (1978), V of **The Glasgow Edition of the Works and Correspondence of Adam Smith** (Oxford: University Press).

Turgot, A.R.J. (1770) **Réflexions sur la Formation et la Distribution des Richesses** (Paris).

Vaggi, G. (1985) 'A Physiocratic Model of Relative Prices and Income Distribution', **Economic Journal**, Vol.95, December.

West, Edward (1815) **Essay on the Application of Capital to Land** (London).

PROVISIONAL

SMALL-SCALE INDUSTRY IN RURAL AREAS: THE ITALIAN EXPERIENCE

Giorgio Fuà,
Dpt of Economics,
University of Ancona
(Italy)

Eight IEA World Congress
Session 16

Small-scale industry in rural areas: the Italian experience

1. A historical retrospect

In Italy, as in other countries, the beginning of modern industry was largely based on small firms operating in rural areas or "putting out" work to rural dwellers. A comprehensive account of Italian experiences with "small scale industrialization in rural areas" would have therefore to start from a remote past, and would be too large a subject for the present paper.

So, I will focus only on a singular feature of recent Italian history. But let me introduce it with a few historical statistics.

At the eve of the 20th century Italy was still a predominantly agricultural country. If we take as a rough indicator of industrialization the percentage ratio of active population in industry (1) to total active population, we find this index to be scarcely 20. See chart 1, which also provides a geographical partition of the country. Nineteen of the twenty present administrative regions have been grouped in three partitions, North-West, North-East and Centre (heretofore labelled NEC), South, each of which is sufficiently homogeneous as concerns recent economic history. The remaining region, Latium, is shown apart, because its evolution is strongly marked by the presence of Rome, the Italian capital, which accounts for about three quarters of Latium's total population.

It appears from chart 1 that at the turn of the century the industrialization index was near the national average in all geographical

---

(1) In the present paper I refer to Population Census figures, corrected for changes of boundaries and of industrial classifications, and I include in "industry" items 2, 3, 4 of the International Standard Industrial Classification (United Nations)

Chart 1 - Ratio of active population in industry to total active population

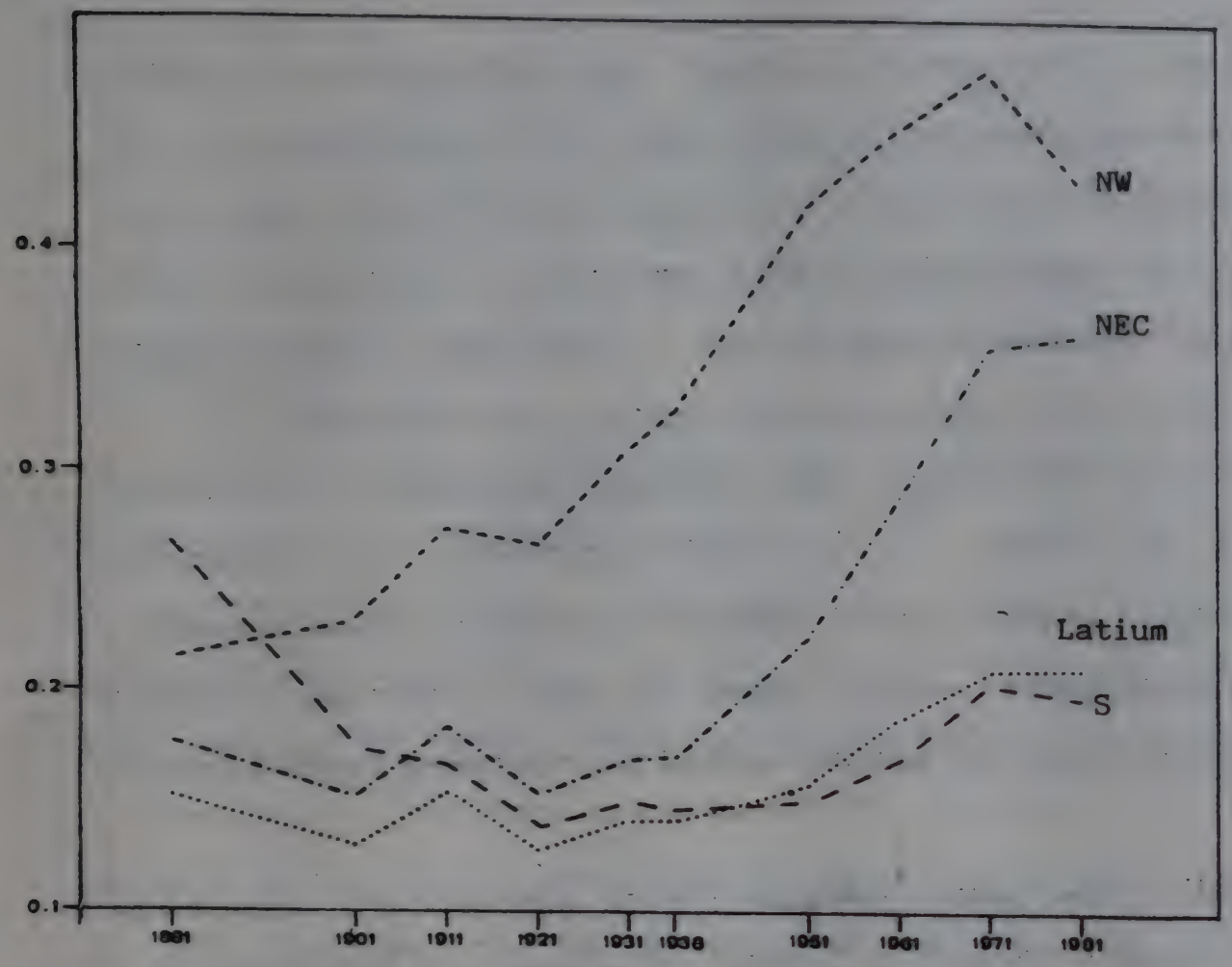
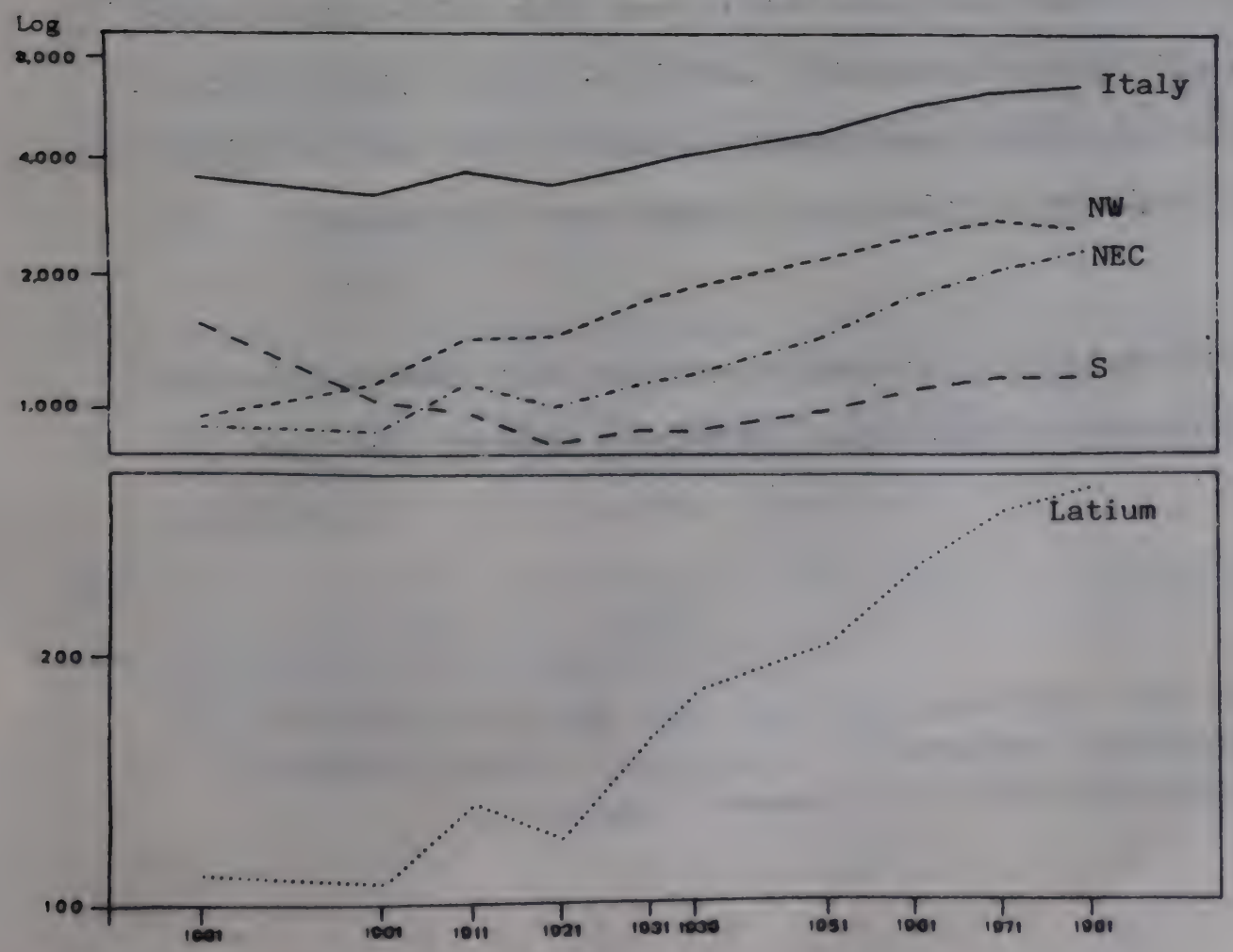


Chart 2 - Active population in industry (000)



partitions. (2)

Since the turn of the century, however, the industrialization index shows a strong increasing trend in the North West, while there was not such a trend in other parts of the country. Consequently at the last census preceding World War 2, the index for North-West was twice as high as the index for other partitions: North-West had become a moderately industrialized economy, while all the rest of Italy was still mainly pre-industrial.

Around the mid of the century major changes took place in the still pre-industrial part of Italy. In the NEC partition, an endogenous industrialization process gained speed, without any explicit State support, and resulted in a development pattern based on small firms and diffuse location, very different from the example set by contemporary North-Western industry.

In the South, there was a massive State action for promoting industrialization, largely through an inflow of capital and of managerial and entrepreneurial capacity from the North.

As shown in chart 1, the industrialization index for NEC rose appreciably between 1936 and 1951, and very rapidly from 1951 to 1971. The index for the South also moved, but later and slower. Thus NEC regained much of the ground previously lost to North West, while the South went on losing.

After 1971 the index kept approximately stable in NEC and the South, and declined in the North-West, reflecting a marked evolution towards a service economy.

We may be interested in considering - besides the industrialization index - the absolute number of population active in industry (see chart 2).

---

(2) Actually, in 1881 the South was above the rest, but this was due to female labour precariously employed in traditional textile activities, a phenomenon which dwindled away in subsequent decades.

It is found that the comparative performance of the three major geographical partitions through the last 100 years as concerns the latter is roughly in line with that concerning the former (3). Indeed, the recent comparative success of NEC shows up even stronger in chart 2 than in chart 1, because the absolute amount of its industrial labour force continued to increase very fast from 1971 to 1981, when its industrialization index had stopped increasing significantly.

The position reached to-day may be summarized by saying that while the North-West is a mature industrial economy facing de-industrialization, NEC has eventually become a fairly industrialized economy, and the South is still mainly pre-industrial. The fact that industrialization progressed more in NEC than in the South, despite the State policy favouring the latter, can be explained on different grounds. It may be partly attributed to greater proximity and to better communications with the old core of Italian industry and, more important, to the pre-existence in NEC of a specially favourable social structure. But much merit is also due to an industrialization process wholly based on local rather than on transplanted resources.

In the following I will expound the NEC industrialization model (4), because it provides a lesson - about the potential for development latent in local resources, and how not to waste it - that might be found interesting in other countries confronted with the need to industrialize rural regions.

---

(3) Things are different for Latium. Due to the attraction exerted by Rome, population increased in this region at a much faster rate than in average Italy. The same applies to total active population, and to active population in industry. But the ratio of the latter to the former increased less in Latium than elsewhere.

(4) I shall largely draw from a previous study; G. Fuà, L'industrializzazione nel Nord-Est e nel Centro, in G. Fuà and C. Zacchia (eds), Industrializzazione senza fratture, Bologna 1983.

2. General features of the NEC model. (a) The starting point.

A first important factor in the model is the environment. The original environment is typical of the Italy of the independent Comunes, eg. Tuscany (as opposed to the territories of the ex-kingdom of Naples).

Thus the territory is rich in small and medium-sized towns - urban centres with long traditions of efficient and democratic local government and vigorously engaged in commerce, the professions and handicrafts.

The countryside is covered by a good road network, is fairly well served by infrastructures, and has reasonable access to services. The family-run, small-scale enterprise (owner, share-cropped or tenant) is common in agriculture. The rural population is large and has close links with the population of the towns.

In the whole population (rural and urban) there is a high proportion of self-employed workers. The economic role of the family is often not confined to consumption, but covers production too. A large part of the population has a house, a smallholding or a family shop to fall back on. Relationships within the extended family and with the neighbourhood are supportive and there is marked community participation and social integration. This sort of environment has a high potential for development.

We can identify some general elements in the area as a whole which explain why it becomes ripe for the industrial development at a certain moment in time. There are three essential factors. The first is the world-wide tendency for employment in agriculture to fall, which, in the long run, will inevitably make itself felt in the NEC area. A second factor is the world-wide progress in communications and transport, which creates new opportunities for contacts between these areas and the outside world even with points a considerable distance away. Thirdly, while the world demand for industrial products is increasing, the more mature, centralized industrial systems are becoming more and more rigid, bureaucratic and expensive, thus leaving room for the development of new types of industrial

system.

In addition to these factors which indicate that the time is ripe for a change, local agents spark off change. In some cases, the change comes about when work from distant firms is parcelled out to those who work at home; after a while the more enterprising of these workers set up their own business. In other cases, returning emigrants act as agents of change: in foreign countries, they have had the opportunity of acquiring industrial experience, of establishing contacts with overseas producers and markets, of putting aside some savings, and, when they come back home, they invest in small businesses of their own.

There are some areas where industrialization spreads from a neighbouring zone. Finally, we should ention the cases in which industrialization gets under way because capital and entrepreneurial know-how accumulated in the area from other activities, e.g. agriculture and tourism, seek employment in other ways.

In the following section we will describe the process thus set in motion.

3. (b) The industrialization process at work.

On the one hand, we have a mass of workers who are no longer able to find satisfactory jobs in agriculture, but are unwilling to leave their homes where they feel integrated and protected, and are therefore looking for work as near home as possible. On the other hand, in this world of family businesses and self-employed workers, there is wealth of management experience, a spirit of initiative and a sense of responsibility, and all these gifts, even in small doses, are wide-spread among the population. This potential is then mobilized to harness the surplus agricultural labour, and the result is the setting up of small, or even tiny, industrial initiatives.

The new enterprises and their growth and propagation are mainly financed directly from family savings. Given the limited savings available,

the investment strategy adopted proceeds by small steps. The enterprises are set up in places where local labour is available and where existing private and public infrastructures can be utilized; the enterprises are therefore scattered widely over the territory as befits a logic of development which exploits existing structures as far as possible, while minimizing the break with tradition.

This type of industrialization also allows enterprises to avoid excessive wage claims and labour conflict. There are two points to consider here. Firstly, as they can continue to live at home, the new industrial workers finds themselves in a favourable position (compared to those workers who operate at some distance from their home) as to the availability of supplementary activities, the cost of living, the quality of life, and social security, and this is one of the reasons for their moderation in wage claims. Secondly, there are few social distinctions between the new entrepreneurs and their workers; there are indeed often family ties, and, moreover, there is considerable social mobility, which favours a climate of cooperation.

The substantive and technological contents of production are at one with the other characteristics of the NEC model which we have outlined above. The new industry concentrates on those sections, technologies and types of product which do not present insuperable disadvantages for small-sized firms. It specializes, where it can, in a type of production which allows it to make use of local craft tradition. Production such as that described above rarely finds an adequate outlet in the neighbourhood. And so, a large proportion of the industries which develop within the NEC area, work chiefly for markets outside the region or abroad, which is possible because of recent progress in transport and communications.

We can now answer the question posed by those students of the economics of industrial location who ask whether the development of industry in certain districts rather than others depends on the presence of market

outlets, the presence of raw materials or on other factors. Undoubtedly in the NEC model "other factors" play the largest role. In this model, industrialization finds fertile soil in the local (if still latent) supply of entrepreneurial energies, labour and savings, and in the existence of a well-run society with its institutions, its culture and material infrastructures. The success of the model relies on its capacity to combine all the strong points and resources of the existing organization and harness them to modern development. This assumes that transplants and changes are not so drastic as to shatter the existing social pattern, thereby squandering valuable resources.

Two development phases - In the first phase, due to underemployment and depressed local conditions, the new enterprises are faced with an abundant and undemanding labour supply. Moreover, both the local authorities and public opinion are favorably disposed to enterprises creating new opportunities for employment, and the regulations are not too strictly applied to these enterprises. On the other hand, in this first phase, new enterprises are unlikely to be able to compete on equal terms, technically and organizationally, with well established firms. These two characteristics of an industrial world still in its infancy - modest capacities and modest demands - offset each other. Enterprises which are still technically and organizationally inferior to established firms can be profitable and competitive if they pay lower wages, lower taxes and do not have to conform strictly to regulations on working conditions and environmental pollution.

At a later stage, when the industry has grown, labour becomes more demanding and social controls more rigorous. The wages, charges and regulations which are borne by the enterprises tend to equal those of established industries, and the firms can maintain their profitability and competitivity only by raising their productivity.

In this phase, the NEC industries make rapid technical and organizational progress by perfecting the organization of the integrated

system of small firms and increasing specialization in quality production, that of small batches or even customized production (for example, robots).

After this brief outline of the model as a whole, we shall examine some details.

4. Further details. (a) The entrepreneurs and the workers.

The labour force comes mainly from the families of agricultural workers, at least in the beginning. The majority of the workers have some sort of family property (small-holding, shop or house), and so have a safety net to catch them in hard times. They are not "proletarians".

While the leaders of the first wave of industrial development in North-Western Italy came mainly from the upper classes, those of the NEC development come from all classes. Indeed, the great majority come from the lower-middle and lower classes. After the pioneers, the entrepreneurial ranks are swollen by people who started as workers and who have then set up their own business in the same industry.

Thus, class differences are not marked. Workers and employers come from the same or similar social backgrounds, and are connected by family ties and social mobility. They have a common work ethic handed down to them from the pre-existing society of family-run farms and craft activities. It is an ethic based on the traditional conviction that there is a necessary relationship between effort and reward, between commitment to one's work and social success. This leads to emulative behaviour and to labour relationships based on cooperation rather than strife. Even the problem of the loss of a job can be faced with less anxiety, when, as is most often the case, the worker has an economic base in the family which can temporarily give him refuge, and when a large number of ways are open to provide his return to the labour market. For this reason, enterprises face little resistance to plans for reconversion or retrenchment.

We may also note that, in this situation, a whole series of factors serve to keep wage claims within bounds. They are briefly examined below.

Wage levels and standard of living - In the first place, certain factors permit the achievement of a given volume of real purchasing power with a money pay lower than that which would be necessary under conditions of centralized industrialization. Thus, the average cost of housing is lower because old houses remain in use and the price of new dwellings is not so high as in large and populous cities. Family ties with agriculture mean that certain foodstuffs can be provided on favourable terms. Commuting between home and work is generally less expensive, both in time and money, than it is for workers who live in the cities.

There are many other advantages, which are not so easy to quantify in terms of money, but are none the less appreciated, and which accrue from the workers' remaining in their own surroundings. We will pass over these and take up one final point.

This is the high degree of utilization of the labour potential. The widespread existence of productive activities within the family and the close network of family and neighbourhood relationships creates the conditions for the employment - although without formal work contracts - of those marginal elements of the work force (housewives, retired people, students) who, in other circumstances, have difficulty in finding work. As well as giving employment to these "part time" workers, the surroundings favour a super-utilization of the "full-time" workers. Men who own small business always tend to work long hours, and they are numerous here. Wage-earners here often have a second job to which they devote part of the time left over from their primary jobs. These second jobs often consist simply in giving a helping hand in a family small-holding or shop. This is also the temporary solution to inactivity found by many workers when they are on the dole. And moreover it serves for some as a means of taking advantage of their holidays.

5. (b) The small enterprise system.

The small size of the enterprises is a key element. In these particular environmental conditions, it is undoubtedly the formula which gives the greatest possibility of success and also that which best preserves the environment.

It is the formula most suited to local entrepreneurs who would not be able to raise large amounts of capital or manage complex organizations even should they wish to do so. It is also what makes it easier to find man-power in an essentially rural area, studded with small and medium-sized towns. Such a territory does not offer a pool of labour suitable for large industrial agglomerations, but it does provide labour for smaller and more numerous industrial units.

Furthermore, industrialization based on small enterprises does not cause so much of an upheaval as that based on large concentrations, as regards not only urbanistic and landscape values, but also the existing social structure. For example, the system of small enterprises maintains the continuity of the productive role of the family and of the old work tradition, and does not upset the balance of democratic local government as much as would the creation of large-scale industry.

Type of production preferred in the NEC model - Choices of types of product and technology are influenced by three considerations, whose relative weight is modified as development proceeds.

Firstly, production lines are chosen which are within the cultural horizon and the technical and financial capacities of the local entrepreneurs. In the early stages of industrialization, this implies the adoption of technologies which are not too alien for a world of small farmers and artisans. Moreover, those industries are preferred which have a link with the earlier craft specializations of the individual areas. A large number of important industrial districts have an ancestry

of this sort. The fact that these industries evolve, without a break in continuity, from a preexisting craft tradition makes their first steps easier and does not stop them, as they develop and diversify, from gradually adopting advanced technology.

Secondly, the environmental conditions existing at the outset encourage the industries specializing in the type of product which allows them to take advantage of the relatively low cost of labour and the lack of rigidity in the regulations concerning the protection of the environment and the health of the workers. Both cause and effect will disappear with industrial progress.

One last point. Those industries are preferred in which it is possible to break down production into stages or products without having to use inferior techniques. Thus, even a very small enterprise can, by concentrating exclusively on one stage of the process - and/or on a few component parts of the product - avoid the risk of being below the optimal size from a technical point of view. We have left this point to the last, because, as we shall see in a moment, it has the most important consequences for the NEC industrial structure. Of the three points mentioned above, it is the one which remains valid for the longest time. It combines with the other two points to condition the entrepreneurs choices in the early stages of industrialization. Then, as development proceeds, its influence increases, while that of the other two declines.

Division of labour and methods of integration - A high level of specialization in production implies a close-knit network of interdependent industries. In the case of production in the strict sense of the term a high level of specialization in work stages and end products can solve the problem of making small sizes compatible with an optimal technological level, but, in the case of other important functions such

COMMUNITY HEALTH CELL
LIBRARY
AND
INFORMATION
CENTRE
EC-100
N86

as financial administration, marketing and personnel management, the small firm finds itself at a disadvantage. It is, therefore, expedient for the small enterprise to entrust these functions to specialized agencies, which work on a reasonably large scale and serve a number of producers. We thus have a combination of two closely-knit networks: the division of labour among a number of manufacturers and the division of labour between manufacturers and tertiary firms offering the necessary services.

To say that enterprises make use of the division of labour is the same as saying that they form an integrated system, and, in fact, the development of a system of integrated small enterprises is one of the most commonly recognized characteristics of the NEC model. Writers have spoken of "industrial districts" (borrowing the name from Marshall), "area systems", "clusters of enterprises", or "constellations of enterprises". Each of these writers was obviously thinking of a different variety of the integrated system, which has indeed many different forms. Some systems are clearly circumscribed (the majority of transactions are carried out within the system), while others have vaguer boundaries; some systems are restricted to a limited territory, while others are not, and, finally, in some systems the association of enterprises is formally regulated while in others it is not.

Methods of cooperation vary from financial participation to supply contracts, from simple family relationships to informal temporary agreements. In order to give a few instance, we can start by mentioning the coordination of small Tuscan industries by private export firms with offices in Florence, which not only coordinate foreign demand with Tuscan production, but at the same time carry out important complementary functions, giving mercantile and financial assistance and controlling quality.

In other cases, there are forms of association. For instance,

the associations of artisans and small entrepreneurs in Emilia have created centres which prepare wage packets, keep the books, pay VAT contributions, and fill in tax forms for their members. There are also cooperatives for the sale of products and, still more important, cooperatives which act as guarantors to the banks for the solvency of the single entrepreneur and negotiate the most favourable interest rates possible.

We may conclude these examples by considering the highly individual model of integration offered by the Prato wool industry. In this system there are many leading firms which have no employees whatever, consisting only of the entrepreneur himself. It is he who designs the material, has the yarn spun, and commissions the weaving, finishing and mending from different firms.

Industrial districts specializing in one product - A phenomenon found fairly frequently is the geographical agglomeration of small enterprises either producing similar goods or vertically integrated; in other words, the formation of areas specializing in one type of product.

It is a well-known fact that the contiguity of many enterprises producing similar goods creates a complex of economic factors and stimuli influencing each single firm, and for this reason, the process of agglomeration, once under way, has an avalanche effect, caused by the reciprocal strengthening of the firms inside the area, by the arrival of other firms from outside and by the involvement of the surrounding territory through overspill or annexation.

The luxuriant growth of which these agglomerations are capable is, in the short term, an important component of the overall growth of the NEC industry, but, if it is not properly channelled, it runs the risk of causing long-term difficulties. Two dangers must be considered. Firstly, it is better to avoid the total, or almost total, dependence of a highly populated area on one very limited specialized product; the

first crisis in the sector would cause a social disaster. Secondly, we must fear a situation in which the "area-systems" act as magnets attracting a concentration of population and activities, thereby causing congestion within the area and abandonment outside it; should this happen, the underlying conditions from which the NEC model draws its strength would no longer exist.

Problems of services - As noted above, industrialization based on small enterprises following the NEC model demands and stimulates considerable growth in the supply of services for these enterprises.

The range of services offered by existing private agents is rich and varied, but it could be improved. Not only are there certain services where either quality or selling price is exposed to criticism, but there is also a whole series of services that is excluded or seriously neglected. We refer to scientific services, to basic educational facilities and to all those services, which a small firm (without the wider operational horizons of a large enterprise) is unwilling to pay for by itself, as in any case the greater part of the benefits produced from these services will not accrue to its own production alone but be spread through the system.

Given the fundamental importance of services to production in the NEC model and the gaps in the structures created by private enterprise, we must consider the possibility of supplementing them from public sources. Experiments on these lines have been carried out especially at local and regional level, but results so far have been modest. This is hardly surprising given the difficulty of finding forms of public aid compatible with the NEC model's way of working, ie. which invigorate it without spoiling it (by eg. bureaucracy, "welfarism", and nepotism).

The service activities stimulated by NEC industrialization show a marked tendency to concentrate in the towns. This gives rise to a paradoxical situation in which a decentralized, rural industrial model

leads to a centralized, urban tertiary model. This spontaneous tendency is reinforced by certain regional and local administrations who are planning to develop country towns as capitals of the "tertiary sector"

If things continue in this way, and if, as is generally considered likely, the tertiary sector is destined to absorb an increasing proportion of the work force, there will be a progressive weakening of those decentralized structures which today form the strength of the NEC model. This is not all, however. If this territorial dualism persists, whereby the services go to the towns, while industry remains in the country, the differentiation between services and industry will widen and, in the final analysis, reach a complete antithesis. Should the service industries continue to offer higher wages and better working conditions, the feeling that the towns are prospering at the country's expense could be aggravated and thus could recreate a potential rivarly and distrust between town and countryside of the kind familiar to us in other situations in history, when "countryside" conveyed the idea of "poor workers on the land".

For all these reasons, we cannot but be preoccupied by present tendencies. It is, however, obvious that the development of service industries is to be encouraged, and that, as things are at present, workers in this sector secure considerable economies from a marked urban concentration. But the existing situation is also the result of the policies adopted, and we can attempt to change that by giving our policies a different slant in the future. In particular, we may envisage a policy aimed at taking advantage of the considerable possibilities for decentralization offered by new technological developments in telecommunications and telematics.

The strengths of the system - The analysis we have carried out shows the logic underlying the formation of the system of small enterprises. Small dimensions are adopted because this is the highway to a

development based on local resources, and the enterprises must be linked together to form a system, in order to avoid the diseconomies which would otherwise stem from their smallness. We must now ask whether the results obtained - the system of small enterprises - is simply a poor man's second best, something which poor countries have to accept because they are not (yet) able to construct a system based on large enterprises, or whether the decentralized model may not in some ways be actually superior. The answer is that the system of small enterprises has certain strengths (just as it has obvious weakness). We will now review the most important of these.

We should first stress the favourable environmental conditions produced by the overall working of the NEC model, such as low cost of living, intensive utilization of the labour potential, and survival of the old attitude to the work. On the one hand, the small enterprises, as essential elements in the model, help to produce those conditions, and, on the other hand, they benefit from them in terms of lower costs and more efficient business management.

Moreover, "smallness" allows faster adaptation to continually changing markets and technologies. In the first place, the small firm, who is less bound than the large one by the dead hand of bureaucracy and trade union rules, is quicker to modify the allocation and size of the labour force and other resources. In the second place, a system of small enterprises makes it possible, by the simple transfer of sub-contracts, to solve cases which would require closures and relocation of personnel in a large firm system. In the third place, the NEC system gives an outlet to the inventiveness and spirit of initiative of a large number of people, and encourages these qualities through competition and emulation. So, even though, as we have seen, basic research may be neglected, there is a profusion of the type of research which is the closest to industrial application and which leads to a continual flow of small

innovations (almost of the "learning by doing kind").

Greater flexibility and a more open attitude to innovations make the small enterprise the most suitable one for production on a small scale or by single items. It therefore is at an advantage in those markets where demand is either fragmented for geographical or social reasons (down to the exceptional case of "customized" demand), or variable in time (rapid fashion changes or frequent innovations).

This position in the international division of labour gives the NEC model a lead, because the relative importance of these markets is increasing. The NEC-type industry can, therefore, seize on this opportunity. Indeed, it has already begun to do so. It can rely on its greater flexibility to beat the competition of more sophisticated economies as it can rely on qualitative and technological superiority to beat the competition of emerging economies with low wages.

6. (c) Capital formation.

The following are the main characteristics of capital formation in the NEC model. Families have a high propensity to save, and these savings tend to be invested directly within the family. The investments are made with an eye to producing immediate results in terms of production (ie. the incremental capital/output rate is kept low). The result is that local industry achieves a good growth ratio relying on local savings and depending little or not at all on a net capital inflow from outside.

As to the characteristics of these, in the NEC model family savings are used mainly to build and improve the family's premises and equipment: the house, the small-holding, the workshop and the shop. This gives them two important qualities. In the first place, while serving as a reserve for the future and as an income-yielding asset, this type of savings, more than any other, satisfies the saver's desire for self-

fulfilment. Secondly, it offers the saver a certain security as to maintaining the value of his money in times of inflation. These two considerations, self-fulfilment and security, help to explain why the family's propensity to save is generally higher in the NEC model than in other communities where centralization of settlements and productive structures offers less opportunity for direct investment.

It should be noted that differences in savings as shown in statistics reveal only part of the truth. Some of the time off from "official" work is spent in accumulating resources, eg. family house-building, during weekends. Activities of this kind create income, savings and investment which the national accounts ignore. Of course, this use of free time is found everywhere, but there are signs that it is particularly common in the NEC districts. This is not surprising, considering that the whole NEC rationale encourages and facilitates it.

The above description portrays a world of largely self-financing investors, and this is a strong point in the system in the sense that the enterprises are not deep in debt and are therefore less vulnerable.

We shall now examine the characteristics of real investment, and first we must consider its volume. As the location of new productive initiatives tends to be chosen on the basis of pre-existing structures, past investments can be recouped, and there is a reduction in the new investments needed to launch these projects. This observation holds good for every type of infrastructure - from workers' houses to power lines and roads, and includes the whole network of services needed to create civilized surroundings. It is also valid to some extent for the factory buildings and plant. Small firms frequently start out in buildings not designed for the purpose and adapted, for example, from warehouses, storerooms or stables, with makeshift equipment. This allows them to begin production with a minimum of new investment. If production is

successful, and as both the funds available and the cultural horizon expand, they will gradually adopt more sophisticated technological and logistic solutions. And so on, step by step, without great leaps forward. When one firm leaves its buildings and equipment for better ones, the old assets are frequently taken over by another firm which is trying to move one step up the ladder, too. So the progress made by one firm makes things easier for another, and, by a chain reaction, the whole group gradually moves upwards, making the maximum use of the capital available.

We must not expect the results of this investment model to be impressive from all points of view. They may not be só for technicians and town planners, as the model produces an industrial landscape dotted with provisional solutions consisting of makeshifts buildings and outdated technologies. This may be cause for regret, but, given the limited quantity of investment, the model has the great advantage of allowing the largest number of people possible to find work and to improve their qualifications by experience. It should also be noticed that this gradual progress reduces the risk of serious errors.

7. Repercussions on agriculture.

While agriculture makes a positive contribution to NEC industrialization, it is also important to examine the influence of this industrialization on agriculture.

Some problems arise from the fact that industry competes with agriculture in the use of land and water resources, but only in a few particular zones the damage suffered by agriculture has been very serious.

Repercussions on the labour market are much more important. NEC type industrialization brings wide-ranging opportunities for extra-

agricultural work in rural zones and triggers the phenomenon of the "multi-activity family" (whose members are employed both in agriculture and in other types of work) which gives a breathing space to agriculture. The possibility of income from extra-agricultural sources helps the family to remain in its place of origin and thus averts the danger of the countryside being abandoned - so common in models of centralized industrialization. From a plurality of activities the family both derives a higher income and gains wider experience advantageous for agriculture. Those members of the family employed in extra-agricultural activities bring new technological and administrative skills to the management of the family farm, and employ their savings in agricultural investment, with possibility profound changes in agriculture.

We must also remember the ability of multiactivity families to weather the seasonal variations in agricultural work.

Agrarian policy will, however, have to face dramatic choices in the future, following the effect of industrialization on young people's professional ambitions. Among today's multi-activity families, the leading role in the small family farm remains, on the whole, in the hands of the older generation. The younger generation is not interested in taking over, because youth find extra-agricultural employment more satisfying and less demanding. Of course, a great many young people appreciate the fact of belonging to a family owning a smallholding, but very few are anxious to run it themselves. If this trend continues, the small family farm, which is one of the pillars of the NEC model, will gradually cease to exist for lack of new generations willing to take it over. A policy must be devised to cope with this possibility. On the one hand, we should ask ourselves whether it is possible to concentrate on a really substantial package (in education, finance, public services, prices, etc.) that would make small farm management attractive to young people again. Following the same line of reasoning, we should also

consider a plan to change the small farm into a diversified business e.g. agro-tourism, which would make its management both financially and personally more rewarding. Looking at things from the opposite point of view, one might suggest a policy which would accept the decline of the small farm and favour the setting up of farms large enough to permit the exploitation of brilliant managerial capacities and thus attract the best qualified type of youth. We need not even dismiss the possibility of separating the two functions present up to now in small family farms; indeed a system could be envisaged in which large farms take over market production, while family smallholdings produce for domestic consumption.

8. The outlook.

There is widespread agreement that, up to now, the NEC model of rural industrialization has been a relatively successful experience. Without an explicite plan, it has succeeded, area by area, in rallying local potential for entrepreneurship, work and savings, and in using to advantage the material and social structures, probably with better results than would have been possible using imported models and resources. The material well-being and the cultural level of the population have improved substantially; social integration and mobility have been strengthened, and there has been no serious disruption.

This on the whole bright picture, however, is not without some shadows. Industrialization has brought with it certain evils which a more sagacious public policy could have avoided. But the positive results greatly outweigh the negative ones.

While an assessment of the results obtained can easily be made, future developments are controversial. We have to consider whether, precisely as a result of the progress made, the decentralized model which has been the basis of the NEC economy (small enterprises, low territorial concentration, fundamental importance of the family and the

agricultural environment) is destined to lose its pride of place to a completely different model of development, characterized by large enterprises and complex organization, by metropolitan concentration and a sharp break between town and countryside. Should the NEC economy develop in this way, it would be a repetition of events in earlier developed regions and countries. There, too, industrialization began in a decentralized form, and only became centralized in a second phase of development.

The history of earlier developed countries, however, presents a third phase which has been manifest for some time, and which gives cause for reflection. Urban congestion and huge industrial centres have begun to make their negative effects felt (ungovernability, sclerosis, lack of individual responsibility), and this has led, both in theory and in practice, to a new movement towards decentralization. This should serve as a warning to the later developed countries and regions, such as NEC. We must ask ourselves why the latter should slavishly copy the policy of centralization, only to discover one fine day - too late, as usual - that they, too, will have to make a U-turn and begin to decentralize again.

The solution suggested here has little chance of being automatically adopted. In an earlier phase of NEC development, both cultural survivals and automatic economic mechanisms were leading society towards decentralized development, without any explicit plan having been adopted; but today the situation is different, and the automatic bias in favour of centralization is now growing stronger, and threatening the decentralized model. Thus the increase in income and international contacts through business, tourism, and education abroad are all leading to the adoption of "consumistic" models. Young people who now have easy access to higher education want safe careers such as are afforded by large bureaucracies. Commercial attempts to "sell" the consumistic model of life are highly organized on a world scale, whereas there are no

similar organizations to sell competing models.

The progress of the NEC development in a way which will guarantee the advantages of the decentralized model cannot therefore be left to chance, but calls for a clear realization of the situations and an explicit policy.

BASIC STATISTICS

	1881	1901	1911	1921	1931	1936	1951	1961	1971	1981
Active population in industry (000)										
North West	946	1,122	1,409	1,459	1,757	1,867	2,211	2,537	2,766	2,653
NEC	921	883	1,112	1,008	1,119	1,181	1,425	1,758	2,054	2,336
South	1,564	1,024	969	824	884	899	976	1,061	1,153	1,151
Latium	106	105	128	116	155	176	205	262	321	353
Total Italy	3,537	3,133	3,618	3,407	3,914	4,123	4,817	5,618	6,294	6,493
Ratio of active population in industry to total active population										
North West	.215	.230	.271	.264	.309	.322	.417	.451	.479	.428
NEC	.175	.153	.182	.151	.167	.168	.223	.288	.353	.359
South	.266	.175	.165	.139	.149	.147	.149	.164	.202	.197
Latium	.151	.128	.154	.127	.140	.140	.156	.186	.208	.208
Total Italy	.217	.181	.201	.179	.202	.204	.246	.287	.334	.321

INTERNATIONAL ECONOMIC ASSOCIATION
EIGHTH WORLD CONGRESS
New Delhi, India, 1-5 December 1986

SESSION 16

Agriculture, Industry and Economic Development in a Historical Perspective

WILLIAM PETTY AND THE CONCEPTUAL FRAMEWORK FOR THE ANALYSIS OF ECONOMIC DEVELOPMENT

by

ALESSANDRO RONCAGLIA

University of Rome

Summary. This paper stresses the historical relativity of the agriculture-industry dichotomy used in the analysis of economic development, by considering the 'prehistory' of this notion. First, it is pointed out that the distinction between agriculture and industry was not so clear-cut in XVII century England, and was not used as an analytical tool by XVII century economists such as William Petty. Second, the conceptual prerequisites for the use of such an analytical tool are examined: the idea of quantitative relationships in economic science, the concepts of market, commodity and price, the notion of the economic system, and the idea (still missing in Petty and his contemporaries) of the productive interrelationships between different sectors of the economy as a result of the development of the division of labour. Finally, some questions stemming from the preceeding analysis are raised.

WILLIAM PETTY AND THE CONCEPTUAL FRAMEWORK FOR THE ANALYSIS OF ECONOMIC DEVELOPMENT

by Alessandro Roncaglia

1. Introduction

Economic analysis establishes relations connecting theoretical variables, corresponding to abstract concepts. These concepts constitute a simplified representation of the complex web of economic events and thus provide a systematic framework for economic analysis. However, after continued use economists tend to take these concepts for granted, as if they were not creations of the mind, but entities with an independent existence.

However, abstract concepts useful at a specific stage of history, for the analysis of specific issues, may lose validity over time owing to changes in the economy and in the relevant issues. This is a vital aspect of economic research, and one which is very rarely gone into. The question must be examined in a historical perspective. This means not so much a historical account of past solutions, but an appraisal of the developments leading up to the current specification of the analytical issue.

In such a perspective, this paper discusses the historical and conceptual prehistory of the agriculture-industry dichotomy.

For economists, the balance to be struck between these two sectors may appear to present a perpetually recurring problem, and one which is at the heart of any analysis of economic development. It should therefore be stressed that the approach to this problem is now generally based on specific past developments in the division of labour and on

corresponding developments in the conceptualization of the economic process. While these developments took place over a considerable period, this paper concentrates on William Petty's times (17th century England) and on his contribution to the origins of Classical political economy. In §2 we will touch on a number of aspects of the pre-18th century economic structure which still obscured the emerging agriculture-industry dichotomy; and in §3 we will discuss the limited degree to which such a dichotomy was perceived by William Petty and a few of his contemporaries.

The use of this dichotomy in economic analysis presupposes not only a certain degree of economic development, but also the elaboration of a method and a conceptual framework concerning for example the role of the State, the market and the division of labour. These factors thus correspond to the institutional basis of an economy in which agriculture and industry can be conceived as two distinct parts of the economy, and in which the balance between them is central for economic development. In our historical analysis, therefore, we will consider: (i) Petty's method (Political Arithmetic, or Political Anatomy)(§4); (ii) his conceptualization of prices (§5); (iii) the relationship between the notion of the economic system and the nation-State (§6). Then, in §7, we will examine Petty's analysis of the division of labour, and some specifications paving the way for the application of that concept to the industry-agriculture dichotomy. Finally, §8 will list some questions raised by this foray into the history of economic thought and stress the specific historical nature of any economic problems, including those regarding the balance between agriculture and industry.

2. The slow emergence of the agriculture-industry dichotomy

The representation of the economic system as a process centred on the dichotomy between agriculture and manufacture (or rather between the productive and the sterile sectors) is the work of the Physiocrats around the middle of the 18th century. Writing in the 1730's, Richard Cantillon (1964) foreshadowed this concept; but artisans were put on a par with merchants, and hence were treated as a secondary factor in a society clearly based on the peasant-landlord and town-countryside dichotomies.

Writing at an earlier date, William Petty (1623-1687) did not even make any clear-cut subdivisions of the economy into sectors (as we will see in §3). To understand this failure, we may recall Petty's own experience as a capitalist-landlord. Around 1670, Petty started a number of 'improvements' in his holdings (in County Kerry in Ireland) with the object of increasing the surplus obtained from them. Thus he established iron and copper works as well as fishing operations, all of which were designed to be vertically integrated, from the mine to the blast furnace in the first case, and from the sewing of the fishing nets to the building and operation of the boats in the second case (Fitzmaurice 1895, pp. 149-50).

This suggests that, in Petty's times, the development of the division of labour was not necessarily accompanied by the separation of commodity production into distinct sectors, each containing productive units distinct from those in other sectors. Various considerations help, together with the rudimentary inter-firm division of labour, in explaining this situation.

First, if the economy is regarded as being subdivided into sectors of activity, the implication is that a sufficient degree of integration of the economy has been achieved, while on the contrary near self-sufficiency of small areas was the rule at Petty's time. Hill (1975, pp.245-50) attributes mainly to high transportation costs the subdivision of England into 'self-contained economic regions', up to the 'canal era of the seventeenth-sixties'. Heckscher (1955, pp. 45-109) stresses that transportation costs were artificially increased by a large number of tolls. As a result, as Braudel (1981, p.23) notes, 'around 1600, corn by land does not travel further than ten miles, generally no more than five; .. wool and cloth no more than twenty to forty miles..'. As a consequence, long-distance trade, including trade between different regions of the same country, were only in expensive products (Heckscher 1955, p.192). In other words, the first steps in market-oriented production mainly covered luxury goods, and not the 'productive core' of the economy.

Second, the guild system (which in England was extended in 1563 to the whole nation by the Statute of Artificers) provided an institutional framework in which the interests of each 'trade' conflicted with those of the others, which made it difficult to recognize a clearly defined category embracing only 'manufacturing'. Many historians (e.g. Hill 1975, p.249) point to the prevalence of trade over class interests right down to the end of the 18th century, e.g. in the clash between the wool and cotton trades.

Third, the town-countryside dualism cannot be identified with the manufacturing-agriculture dichotomy. As Heckscher (1955, p.204) stresses, 'spinning, weaving and dyeing were

practised very extensively among the peasantry for their own requirements in all countries well into the 19th century, within the framework of a more or less closed household economy... Even that kind of industrial activity which was based on exchange was combined.. with agriculture, and for obvious reasons... - plenty of spare time for the rural population during the winter months...' The clash between town and countryside, in this respect, was due rather to the fact that the guild system dominated town manufactures, while, on the whole, the primitive rural manufacturing activities escaped attempts to impose regulations, especially those on the labour process and those governing standards of quality. Thus, the cheaper and sub-standard goods produced in the countryside did not generally come into direct competition with town handicrafts; rather, a large portion of the rudimentary countryside handicrafts went to satisfy the needs of the immediate neighbourhood - so that the dichotomy between guilds and unregulated countryside handicrafts corresponds, at least in part, to the contrast between 'natural' and market-oriented activities, a distinction which was still very important at the time. (It will be recalled that this antithesis is used by Kula in 1970 as the basis for his model of the feudal economy, and by Lewis 1954 in his model of developing economies).

Parallel to this, a fourth factor is the by no means clear-cut distinction between wage labour in unregulated manufacturing and independent peasant activity. Poor peasants, and especially their wives and children, were often forced to engage in by-earning in the clothing industry (cf. Hill 1975,

p.83; Heckscher 1955, p.204). This pressure was obviously intensified by the wide seasonal variations in the demand for agricultural labour.

In short, it can be argued that in the situation in the 17th century, there were subdivisions of the economic system which were more important than the agriculture-industry dichotomy. These subdivisions range from territorial categories to the town-countryside dichotomy, the distinction between different guilds, the division between guild and non-guild activities and between 'natural' and market-oriented activities. These subdivisions were in fact much more generally utilized by writers on economic issues at the time than the agricultural-industry dichotomy.

3. 'Petty's Law' cannot be attributed to Petty

Two notes of caution must be sounded at this point. First, we have suggested that the concept of industry and agriculture as two separate sectors presupposes a certain stage of economic development, and that such a stage was not fully reached at Petty's time. But the position is somewhat more complex.Some factors may be present in economic life without dominating it. Moreover, in conceptualizing economic life, different economists may stress different aspects of it. Nobody could deny the existence, in Petty's days (or indeed much earlier), of the exchange between agricultural and manufactured products brought to the market by separate, independent producers. But, while economic historians are generally eager to go further and further back and discover instances of the organizational forms of modern economies, thus tending to superimpose on the past their conceptual

categories, we should also be aware of the potential importance of more traditional forms of organization: e.g. the largely self-sufficient, vertically integrated productive units, which marketed only their surplus product, in Petty's time. In these circumstances, the problem of the interrelations between autonomous sectors of commodity production was not so visible as it is now.

The second note of caution concerns the attitude of pre-18th century writers. Of course they used terms such as husbandry (or agriculture) and manufacture (see e.g. the passage in Petty quoted below in §6). At the same time, we should recall that the term industry usually meant production in general, or human productive capacity and effort; and the term trade, which was commonly used at the time in the titles of pamphlets on economic issues (the stream of Discourses on Trade) was currently meant to refer to the whole of market-oriented productive activities. But the terms husbandry and manufacture were not used to define the two sectors of commodity production which, together with the services sector, reflect the current three-way split of the economy.

To understand this, one has but to look at the early statistical examinations of the English economy (i.e. the various essays in political arithmetic), such as those by William Petty and his followers, King and Davenant. In fact, neither of these men, both writing in 1695, refers to manufactures as a specific category of economic activity (see Thirsk and Cooper, eds., 1972, pp.770 f.).

As for William Petty, some misunderstandings may be due to the well-known law attributed to him by Colin Clark (1951, pp.395-7). According to that economist, 'Petty's Law' concerns 'the movement of working population from agriculture to manufacture and from manufacture to commerce and services'. This 'brilliant and entirely correct generalization' is attributed to Petty on the basis of the following quote: 'There is much more to be gained by Manufacture than Husbandry; and by Merchandise than Manufacture ... Now here we may take notice that, as Trades and Curious Arts increase, so the Trade of Husbandry will decrease, or else the wages of Husbandmen must rise and consequently the Rents of Lands must fall'. Clark does not give the reference for this passage, only noting that Petty was writing in 1691. But Petty died in fact in 1687. Fortunately the passage can be tracked down in Political Arithmetick, written around 1671-72 and published posthumously in 1691. However, the first and second parts of the passage come from two different sections of the work (Petty 1963, p.256 and p.267), and cannot be combined into a statement on the evolution of the internal structure of the economy. For instance, 'Trade and Curious Arts' in the second passage cannot be considered as exactly equivalent to 'Manufacture' and 'Merchandise' in the first passage, which shows that such terms were far from constituting precisely defined analytical categories. In fact, like King and Davenant after him, Petty does not use consistent subdivisions of the economy into well-defined sectors.

An analogous conclusion can be reached by examining the economic pamphlets of the period. For instance, in the eight pamphlets published between 1621 and 1701 collected by

McCulloch in 1856 in Early English Tracts on Commerce (including writings by Mun, Roberts, Fortrey, Petyt, North), the nearest thing to a subdivision of productive activity into sectors is the classification into 'naturall' and 'artificial' riches or wealth adopted e.g. by Roberts in 1641 (McCulloch 1952, pp.60f.), and by Thomas Mun in 1664 (McCulloch 1952, pp.191 f.). However, this distinction, which also provides the conceptual foundation for Colbertism in 17th century France, can be considered as being more closely linked to the ancient concept condensed in the formula 'labour is the father and active principle of wealth, as lands are the mother' (Petty 1963, p.68) than with the modern agriculture-industry dichotomy. The two dichotomies have certain points in common. So much so that the first can be considered as an immediate forerunner of the second. But the two cannot be identified, especially as regards their analytical utilization.

We are therefore justified in concluding that the use of terms such as husbandry and manufacture on the part of pre-18th century economists does not imply a full recognition of the now current industry-agriculture antithesis.

4. Political anatomy and the economic system

The agriculture-industry dichotomy, then, was not a prominent characteristic of the economy in Petty's days, nor was it a clearly recognized analytical tool in his writings and in those of his contemporaries. But it is clearly a basic feature of our understanding of the economies in which we live. However, parallel to the economic developments which were then paving the way for this dichotomy, there were certain developments in economic thinking which constitute the

prerequisites for the analytical use of the industry-agriculture dichotomy. Such prerequisites cover both the method of economic analysis and its conceptual framework. These prerequisites are often lost sight of in specific problems related to the agriculture-industry dichotomy, though - as we will see in §8 - they may raise important questions. Because of their importance - both as regards method and conceptual framework - we will concentrate on Petty's contributions (drawing on my earlier research on his economics, Roncaglia 1985).

The dominant economic issues in the 16th and early 17th century were usury and State intervention in foreign trade. The 'just price' was still a live issue. The treatment of specific economic problems was not usually related to a full-fledged conception of the economy from which a reply to each specific problem could be derived. Rather, moral considerations provided the stuff of largely normative discourses on economic issues. Outstanding examples of such an approach can be found in the writings of Thomas Wilson (1963) and Samuel Pufendorf (1934), originarily published in 1572 and 1688 respectively.

From this point of view, Petty's writings represent a turning point parallel to the one taking place, round about the same time, in other fields of research as well. There are two bases on which Petty's methodology is built. The first is Bacon's inductive method, a fusion of empiricism and rationalism which superseded both the Renaissance tradition of pure empiricism (technicians and alchemists), and the syllogistic-deductive method of the Aristotelian tradition. The second factor is the stress on the measurement of

quantities as the object of enquiry (Hobbes's logica sive computatio) reflecting the mechanical conception of man and of the world, put forward in particular by that philosopher. This second factor is decisive for the interpretation of Petty's 'Political Arithmetick' ('the course .. to express my self in terms of Number, Weight and Measure', Petty 1963, p.244) as political economy, i.e., as an interpretation of economic life rather than as economic statistics, i.e. the simple recording of the most disparate aspects of economic life. The search for precise quantitative relationships between the phenomena under study reflects the idea (advanced by Hobbes in particular) that knowledge of the world requires the construction of arithmetic or geometric models. This idea in turn can be related to a kind of metaphysical view, according to which quantitative relations constitute the inner structure of the world: as Galileo said (in Il Saggiatore, 1623), 'this great book which lies open before our eyes - I mean the Universe - ... is written in mathematical characters'.

Petty's method, Political Arithmetic, is meant to discover quantitative relations written into the economy. The economy is thus conceived as a machine, or more precisely, as a 'body Politick', with a traditional comparison with the human body (a comparison which goes back to Menenius Agrippa, but here we should recall that the human body is also conceived as endowed with a mathematical-geometrical structure). Hence Petty's favorite term for his method, Political Anatomy.

In order to understand the revolutionary impact on the birth of the new approach to the social sciences of the conception of the economy as a machine endowed with inner

quantitative 'laws' and the role of the new developments in the sciences of nature, we must revert to the situation in the 17th century. 'Fires.., unstable prices, arbitrary taxation, famine, pestilence, sudden and early death' were not only the source of a 'profound emotional instability of our forefathers' (Hill 1975, p.110); they were also obstacles to the notion of 'regularities' embedded in social life. In the economic sphere, the search for riches was not channelled into production in a competitive environment, but into the battle to obtain royal favour or into outright plunder in foreign trade (buccaneering, the slave trade, or the wealth extracted from India). In Hill's words (1975, p.188), 'in the heroic early days of predatory capitalism, there was a speculative windfall element in many forms of economic activity'. In such a situation, Gramsci's (1975, p.1350) observation seems appropriate: 'there was a period in which "science" could not exist ... because the preconditions which create those particular "regularities" or "automatisms" whose study provides the origin of scientific research were not present'. We can thus appreciate Petty's systematic and searching mind imposing on an unruly economic process the idea of a hidden quantitative structure - thus, in a sense, identifying the seeds of the future rather than the characteristics of his own time. This is apparent in Petty's development of the notion of the market and of natural price, which we will consider in the following section.

5. 'Political' and 'natural' prices

A basic prerequisite for treating agriculture and industry as separate sectors is the development of market exchange, e.g. in the form of mediation between the different sectors. Market exchange, in turn, brings up the problem of prices.

In this respect too, Petty provides a basic contribution to the development of the conceptual framework without which any theoretical analysis of prices would be impossible. This aspect is generally ignored by economists, but it is a fundamental one. Indeed, theoretical concepts such as 'commodity' or 'market' or 'natural price', which are accepted as if they were inherent to economic analysis, are the result of a complex process of abstraction.

Each individual act of exchange concerns a specific individual object, exchanged at a specific time and place, at a specific price; but the myriad of individual objects and exchanges can be grouped into sets (such as the 'market for diamonds') because of the similarities between the particular objects collected in the category of 'diamonds', and because of the links among the various individual exchanges of particular diamonds. These links are generally provided by the fact that a specific group of traders is involved (e.g. jewellers), each of them keen on observing the behaviour of the other members of the group and ready to adjust his decisions accordingly. As Braudel (1981, p.126) notes, markets are 'coherent commercial areas'. Petty provides a beautiful example of this kind of consideration in his Dialogue of Diamonds (in Petty 1963, pp. 624-30), where an inexperienced

buyer, unable to decide on whether to buy a specific diamond offered to him at a specific price, is referred by an expert to the 'price' prevailing in the 'market for diamonds'.

Once the concepts of market and commodity are arrived at, the next step is to formulate an abstract concept of price. Here Petty proposes a three-way split: the actual market price, determined by 'contingent' factors as well as 'permanent' ones; the 'political' price and the 'natural' price. These latter two categories are grouped together as the 'natural price' by later Classical economists such as Smith and Ricardo. The difference which Petty establishes among them is linked with the difference between 'necessary' production costs, depending on the state of technical knowledge and on the subsistence costs for the workers, and 'political' costs, which also take into account social costs, such as hidden unemployment. Petty regards these costs as waste, since their existence implies that actual production is lower than the potential level.

The disappearance of the notion of 'political price' in the subsequent Classical literature might be connected with the new role of competition among producers of the same commodity, which brings the price down to the level of 'necessary' costs (including the general profit rate) and drives out producers unable (or unwilling) to stay within the cost limits set by the prevailing technology. But in cases where the technology available to private producers incorporates 'social' costs, Petty's distinction would still be useful. And it was certainly important in a period in which feudal traditions (and especially the guild system) constituted a very powerful barrier to competition.

We need not consider here Petty's theory of value, but would recall that it can be interpreted as a theory relating prices to physical costs of production. Once again, such a theory does not take into account productive interrelations, which lead into a circularity problem. Such a problem has only recently been solved, on Classical lines, by Piero Sraffa (1960).

Hence, as far as the issue of exchange ratios between different sectors of the economy is concerned, Petty's contribution lies once again in his pioneering work on the conceptual framework which, with slight modifications, is still used as the (often unconscious) basis for analysis. However, Petty offers very little in terms of analytical models, owing to the absence of two key elements: the notion of productive interrelations between sectors and the role of competition connecting the determination of product prices in the different sectors through the tendency of profits to settle at a uniform rate throughout the economic system. But clearly the analytical recognition of these two elements required a parallel growth in their role in economic reality.

6. The notion of the economic system and the Nation-State

The systemic nature of Petty's economic enquiry is not to be found in a fully-fledged analytical model of productive interrelations, but emerges clearly in his conceptual framework. In this respect, stress must be laid on Petty's choice of the "body politick" as the object of inquiry.

The "body politick" (which coincides with the economic system) is identified with the Nation-State. This means that, out of the complex network of social interdependencies

(economic and political), certain relations are singled out as being of the greatest importance: those among the citizens of a State, and those between the Sovereign and his subjects. This represents a doubly significant decision about the level of aggregation. A lower level of aggregation is rejected because the relations among the citizens of a single State, and between the Sovereign and his subjects, are considered as fundamental as regards, for example, the relations between the inhabitants of a village or between a Justice of the Peace (or any other local government official) and those under his jurisdiction. A higher level of aggregation is rejected because the system of international relations among citizens of the various States is regarded as being subordinate to the interrelations among the States themselves.

The parallel between the economic system and the human body - between political anatomy and human anatomy - is also utilized by Petty to express his ideas on wealth and money. He shifts away from the traditional parallel between money and blood (which expressed the concern of sixteenth and seventeenth century economic writers for precious metals, considered the foundations of national wealth), and compares money to 'the Fat of the Body-politick, whereof too much doth as often hinder its Agility, as too little makes it sick', while 'the blood and nutritive juices of the Body Politick' are 'the product of Husbandry and Manufacture' (Petty 1963, pp. 112 and 28).

According to Petty (1963, p.113), scarcity of money need not be tackled by favouring the influx of precious metals into the country: 'Nor were it hard to substitute in the place of Money (were a competency of it wanting) what should be

equivalent onto it'. His favourite proposal in this respect is the creation of a land bank. Petty (1977, p.47) stresses that, 'if men were excellently Versed in accompts, Money were not necessary at all and many places as Barbados etc have made shift without it and so they do in Banks'. Thus Petty realizes the usefulness of a development of the rudimentary financial structure of his time; the growth of banks and of mechanisms of financial intermediation is perceived as an institutional prerequisite for the full development of a market economy.

With reference to the identification of the 'body politick' with the Nation-State, it should be recalled that, shortly before Petty wrote, Machiavelli had advanced a unified conception of the Nation-State, giving particular attention to the problem of the political unification of the city and the countryside. In a sense, it can also be said that the limits of Petty's notion of the economic system parallel the limits of Machiavelli's concept of the Nation-State. Gramsci (1971, p.43) notes that 'Machiavelli was only able to express his programme and his tendency to relate city to countryside in military terms'. Something similar can be said for Petty: he perceives that the network of economic relations is subordinate to a unique political authority, but seems unaware of the 'input-output' interrelations connecting the various productive activities, none of which could survive without the others. Machiavelli does not realize the interrelationship between city and countryside, nor Petty those between agriculture and industry, <u>from the point of view of production</u>. Both Machiavelli and Petty situate in the political superstructure the relationships that link city and countryside, and in general the various parts of the economic

system. It is precisely the ability to go beyond this and to discover the technological relations of production that link the various sectors of the economy that constitutes the major contribution of the Physiocrats to the development of economic science. This analytical step is a necessary one for the specification in modern terms of the problem of the balance between agriculture and industry. This problem thus assumes its full significance only after a long process of economic reflection, which proceeded hand in hand with certain transformations in economic reality. In this perspective, the division of labouris of central importance.

7. The division of labour

In explaining the wealth of a nation, Petty attributes a key role to technological and organizational factors such as land improvements (drainage, irrigation, etc.) and investments in infrastructure (roads and navigable canals), or the development of the financial structure (the creation of land banks) and the legal framework providing a firm basis for exchanges of property (the creation of a land register). A very important role is also attributed to people and their productivity. This, in turn, is linked to the division of labour, which we will consider in this section.

The division of labour is, as Schumpeter (1967, p.56) says, an 'eternal commonplace of economics'. Plato's Republic, or the Latin proverb 'nec sutor ultra crepidam', testifies to the early consciousness of the fact that the technical division of labour provides the basis for a hierarchical social structure. Petty's examples (the fabrication of clothes and watches: see Petty 1963, pp. 260-1

and 473) highlight the division of tasks among the different labourers within the same productive activity, and also stress the importance of the technical progress embodied in specialized implements of production (e.g. 'those who command the Trade of Shipping, can build.. a particular sort of Vessels for each particular Trade', Petty 1963, pp.260-1). However, Petty never makes it clear whether the technical division of labour is associated with the rise of specialized independent units of production at each stage of the labour process.

In fact, this point has been a source of confusion even in recent times. For instance, Smith's causal link between the increasing size of the market and the development of the division of labour has been taken to imply (e.g. by Stigler 1951 or Arrow 1979, p.156) an increase in the size of individual firms or industries, so that the system-level relationship between economic growth and technical progress has been arbitrarily reduced to the concept of increasing returns to scale for the individual firm or industry. In order to clarify this point, let us try to classify the different aspects of the division of labour.

The most common distinction contrasts the social division of labour (i.e. the differentiation of jobs within society) with the manufacturing division of labour (i.e. the subdivision of a specific production process into separate stages). These two categories may or may not overlap. Thus, the same job may be present in different firms and different sectors: e.g., administrative employees are required by a chemical firm just as they are by a mechanical firm. But, more to our point, there are different aspects in the manufacturing

division of labour: it can take place within the firm, but it may also involve the partition of the productive process into different parts, each of which is carried on by a separate firm (vertical disintegration). We noted above Petty's own experience in the management of his Irish holdings (or in his activities for the survey of Irish lands, where he employed more than a thousand people in different tasks: see Fitzmaurice 1895, pp.49-55). These cases show that the technical and social division of labour can appear within a large productive unit, a sort of vertically integrated subsystem of the economy. At the limit, only final consumption goods might be exchanged on the market, avoiding any market exchange of means of production among different sectors of the economy - which today represents the majority of market exchanges.

We can thus distinguish intra-firm and inter-firm varieties of the manufacturing division of labour; and we may proceed, in the latter case, to a further subdivision into intra-industry and inter-industry varieties of the division of labour, according to whether the different firms originating in the partition of a production process remain within the boundaries of the original industry or can be classified as belonging to other sectors of activity.

In the latter case (which is the key one for the rise of the agriculture-industry dichotomy), a moment's reflection will show that the evolution of the inter-industry division of labour is not unequivocally related to purely technical changes in the processes of production. In this context, political and social elements, and factors pertaining to the stage of development reached by the economic system in general

are the important ones. Furthermore, it should be recognized that the boundaries separating different industries are not basically inherent in the real world, but are drawn by the observer, who picks out the distinguishing characteristics used in classifying each productive unit in a specific sector of activity. Thus, e.g., a geographical aspect (town-based manufacturing versus countryside-based agriculture) may be combined with other aspects pertaining to the organization of production, to the role of natural forces such as the cycle of the seasons, to differences in market forms (competitive agriculture versus oligopolistic industry). But, once this is recognized, it should also be recognized that the different distinguishing characteristics may acquire or lose importance over time, so that even such an apparently clear-cut dichotomy as the one between industry and agriculture may change its meaning over time.

8. Concluding remarks

The discussion of the preceding sections can be used to raise questions concerning the historical and conceptual bases of various aspects of the industry-agriculture dichotomy. Let us consider some of these questions.

(i) (From §2) While modern economic historians generally utilize the agriculture-industry dichotomy in analyzing 17th century reality, we have seen that the historical preconditions for the full validity of such a dichotomy were not present at the time. Similarly, are we sure that concepts flowing from the analysis of developed economies retain their validity, and indeed the same meaning, when applied to developing countries?

(ii) (From §3) In discussing 'Petty's Law' we noted the difficulty of understanding economists brought up in conditions different from ours. When this happens, should we try to superimpose 'modern' analytical categories on 'lagging' realities, or should we rather try to understand the reasons why economists reared in these conditions tend to use different analytical categories, or to attribute (often only slightly) different meanings to our 'traditional' concepts and analytical tools?

(iii) (From §4) If we reject the idea of 'mathematical laws written into the Universe' (and into the economy), what meaning should we attribute to "economic laws"? (E.g., how can we interpret empirical regularities such as Engel's law, which are so useful in 'explaining' movements over time of the relative shares of agricultural and industrial products in final consumption?)

(iv) (From §5) Do relative prices (e.g. of agricultural versus manufactured products) only express 'necessary' production costs, or are they also affected by social elements such as those considered by Petty in his 'political price'?

(v) (From §6) Petty's concept of the economic system corresponds to the Nation-State, i.e. to the political form of organization which had asserted itself not much before Petty's time. With the growing interdependence, both economic and political, among different countries in the contemporary world, can we still interpret the economic system as coinciding with the Nation-State? or should we identify the economic system with the whole world, or with a block of countries such as the industrialized, developing and planned

ones? or can we consider the situation as one of transition, and each time choose the interpretation best suited to the problem under consideration?

(vi) (From §7) Since the institutional environment can be modified, what is its significance for the functioning of the economic system? E.g., how do the legal environment (such as anti-monopoly legislation), the greater or lesser certainty of property (such as can be ensured by an efficiently functioning land and property register), institutional developments in the financial sector, affect the possibility of a smooth market solution to the problem of the balance between agriculture and industry?

(vii) (From §7) We noted that the subdivision of the economic system into sectors is drawn by the observer, who chooses the distinguishing characteristics of the different sectors (as is also shown by the possibility of different levels of aggregation). Depending on the specific problem under consideration, different characteristics may turn out to be more or less important; the direct reference to traditional classifications by sector (such as the agriculture-industry dichotomy) may sometimes hide the vital characteristic, and the elements of the problem turn out to be specified only indirectly. As we have seen above, these factors cast doubt on the validity of the agriculture-industry dichotomy in analysing the 17th century conditions in which Petty lived. Similar difficulties arise when we consider the agriculture-industry dichotomy with reference to a developing country. For instance, are we tackling the social problem of the relationship between the 'traditional' and the 'modern' sectors of the economy, or the relationships between city and

countryside, or the problem of the productive interrelationships between the two sectors (e.g. the need for food and basic raw materials on the part of the industrial sectors, and the need for fertilizers, tools and machinery on the part of the agricultural sector) - or, as is generally the case, a mixture of all these problems together? In fact, we may find it useful to distinguish the three problems, though obviously related (so much so that we may also speak of three different aspects of a single problem), precisely because this may allow us to use different specifications of the agriculture-industry dichotomy: for each problem, the specification which best fits the nature of the problem under consideration.

These are but a few examples of the questions arising from our discussion of the historical and conceptual-methodological preconditions of the agriculture-industry dichotomy. Of course, such questions - and similar ones - may emerge directly from the analysis of contemporary reality. But clearly they are most likely to be raised in a systematic way in a historical perspective.

Bibliography

Arrow K.J. (1979), "The Division of Labor in the Economy, the Polity, and Society", in Adam Smith and Modern Political Economy, ed. by G.P. O'Driscoll, Iowa State University Press, pp. 153-64.

Braudel F. (1981), I giochi dello scambio, Einaudi, Torino (original French ed., 1979).

Cantillon R. (1964), Essay sur la nature du commerce en général (first published posthumously in 1755), ed. by H. Higgs, A.M.Kelley, New York (reprint of the 1931 edn.).

Clark C. (1951), The Conditions of Economic Progress, II ed., Macmillan, London.

Fitzmaurice E. (1895), The Life of Sir William Petty, Murray, London.

Gramsci A. (1975), Quaderni del carcere, ed. by V. Gerratana, Einaudi, Torino. (Partially translated as Prison Notebooks, ed. by Q. Hoare and G. Nowell Smith, Lawrence and Wishart, London 1971).

Heckscher E.F. (1955), Mercantilism, 2 vols., second ed., ed. by E.F. Soderlund, Allen and Unwin, London.

Hill C. (1975), Reformation to Industrial Revolution, Penguin Books, Harmondsworth.

Kula W. (1970), Teoria economica del sistema feudale, Einaudi, Torino (original Polish ed., 1962).

Lewis W.A. (1954), "Economic Development with Unlimited Supplies of Labour", Manchester School, pp. 139-91.

McCulloch J.R., ed. (1952), Early English Tracts on Commerce, Economic History Society, Cambridge (reprint of the 1856 ed.).

Petty W. (1963), Economic Writings of Sir William Petty, 2 vols.,ed. by C. Hull, A.M.Kelley, New York. (Reprint of the 1899 ed.).

Petty W. (1977), "A Dialogue on Political Arithmetick", in S. Matsukawa, "Sir William Petty: An Unpublished Manuscript" Hitotsubashi Journal of Economics, vol.17 n.2, pp. 33-50.

Pufendorf S. (1934), De Jure Naturae et Gentium libri octo (1688), transl. by C. and W. Oldfather, in The Classics of International Law, n.17 vol.2, Clarendon Press, Oxford

Roncaglia A. (1985), Petty: The Origins of Political Economy, Sharpe, New York.

Schumpeter J. (1967), History of Economic Analysis, 6th edn., Allen and Unwin, London.

Sraffa P. (1960), Production of Commodities by Means of Commodities, Cambridge University Press, Cambridge.

Stigler G.J. (1951), "The Division of Labor is Limited by the Extent of the Market", Journal of Political Economy, vol. 59 n.3, pp. 185-93.

Thirsk J. and Cooper J.P., eds. (1972), 17th Century Economic Documents, Clarendon Press, Oxford.

Wilson T. (1963), A Discourse upon Usury (1572), ed. by R.H. Tawney, A.M.Kelley, New York (reprint of the 1925 ed.).

Ignacy Sachs (x)

Draft for discussion

Market, Non-Market, Quasi-Market and the 'Real' Economy

-Paper prepared for the 8th IEA World Congress,
Delhi, 1 - 5 December 1986

Complementarities and trade-offs between agriculture and industry are usually examined within the context of a commoditized economy and of a division of labour between the countryside and the city, the former being responsible for the production of foodstuffs and other agricultural produce, the latter for turning out industrial goods.

Both these assumptions need to be somewhat qualified. On the one hand, rural industrialization constitutes the backbone of the Chinese strategy aimed at withdrawing before the end of this century about 200 million labourers from agriculture. Rural industries, enabling large numbers of rural people to engage in industrial production without leaving the countryside, are rooted in the tradition of supplementary agriculture with handicraft. The objective now is to disseminate as many modern plants as possible in small towns and in the countryside and to employ as workers members of peasant families, commuting to the factory for the day, but still living in their villages. Labour force is thus shifted to industry without assuming the responsibility for feeding it out of the marketed food surplus and without having to cope with the prohibitive social cost of providing the residential urban infrastructure. Efforts are made to employ as industrial workers one member from each peasant family to ensure a more adequate distribution of income (industrial wages being higher than the monetary income of farm hands). Each family is thus expected to become an agro-industrial household, the basic cell of the modernized economy and of the society. "A household is a production unit, consumption unit and a living unit combined in one. Household management, at present, is both a key yardstick for measuring the social division of labour, while at the same time conditioning its development"(1).

(x) Professor, Ecole des Hautes Etudes en Sciences Sociales, Paris, and Programme Director, the United Nations University.

Clearly in this case the dichotomy rural-agricultural/urban-industrial is blurred. So is the borderline between the commoditized and the subsistence economy.

The emerging rural-urban configuration in China may prefigure a pattern of industrialization that will be adopted by many other developing countries. The more so that recent progress in communication technologies renders obsolete our concepts of economies of concentration, as well as of economies of scale. Decentralization and even 'ruralization' of modern secundary and tertiary activities becomes feasible and, therefore, the trend toward urbanization and metropolization, which has marked so deeply the twentieth century, may perhaps be reversed in the future(2).

For sake of completeness, let us mention, furthermore, that urban agriculture is a reality in many countries, both in the North and in the South. Some urban dwellers grow food inside the cities as part of survival strategies and as a response to the crisis: other do it for their pleasure or out of philosophical convictions. Whatever the motive, urban agriculture is on the increase(3).

On the other hand, non-market economic activities are by no means restricted to tribal and primitive peasant economies. In the industrialized countries about half of the total working time of the society goes to daily household chores, not speaking of an embryonic 'social sector' where people engage into collective, voluntary production of services and goods.

The ways in which the market and the non-market economic activities combine are quite complex. They constitute the fabric of the 'real' economy. The non-market economic activities should not be viewed as a residual category deemed to disappear with the technical progress. Quite to the contrary, their share, in terms of time allocation, may increase pari passu with the reduction of the working-time against wage, as a matter of a deliberate choice on part of people (I shall return to this question later on). The market/non-market dichotomy offers, therefore, a useful starting point to move in the direction of a development theory not exclusively predicated on the categories of the market economy and on the monetary metrics.

• • •

Ever since Adam Smith, conventional economic history associates the division of labour with market development and accordingly views the degree of commoditization as an indicator of economic progress.

Yet, specialization, which depends on the concentration of demand, is already present in non-market economies of both types: the customary economy with its complete 'belowness' and the command economy with its complete 'aboveness', as well as in the mixed types that come between, such as feudalism or classical buresaucracies. Hicks, from whom these definitions are borrowed, describes the Revenue Economy as one "in which a 'surplus' of food and other necessaries is extracted from cultivators, and used to provide sustenance for the public servants... It is a genuine form of economic organization, which is to be contrasted with the market form; it is the principal background against which the evolution of the market is to be studied. It precedes the market, but it has of course survived the market(4).

The extraction of the 'surplus' imposes on the producers an effort going beyond the satisfaction of their direct needs, in other words an alienated work, in which people produce for other people without exchange or reciprocity. Such a situation presupposes already the existence of a Power. As Clastres put it, the political relation of power precedes and establishes the economic relation of exploitation, the power comes before the work; the emergence of the State constitutes the benchmark between the savage and the civilized. By contrast, the subsistence economy is a 'refusal of useless surplus', the will to tune productive activity to the satisfaction of needs and nothing else(5).

Under circumstances, the degree of commoditization of an economy does not tell us much per se about the wellbeing of the people. The access to the market creates opportunities for an expanded production and for beneficial exchanges; it stimulates the technical progress. But the market also acts as a powerful mecanism of exploitation, benefiting the strong at the expenses of the weak.

Nor is it possible to present the evolution of the economy as a linear process of commoditization, culminating in a post-industrial, entirely commoditized, service society. The urban poor in Asian cities have been buying their food from street vendors long before the appearance of fast-food chains in the industrialized countries, while well off American families discover the delights of cooking at home and of growing their own produce. Partial 'decommoditization' of services is one of the choices open to the future societies, ever less absorbed by work to produce the necessaries.

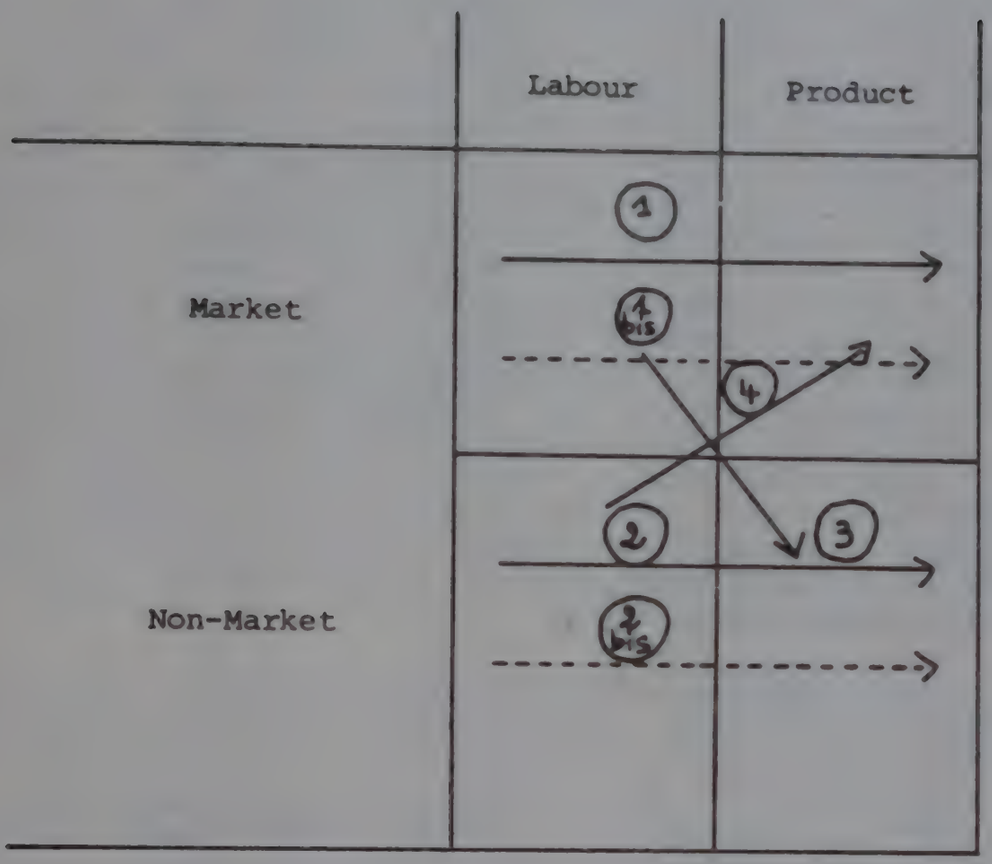
Subsistence economy in its pure form seldom exists. But the majority of mankind, constituted by the peasantry, still operates mixed forms of subsistence-cum-market economy. At the same time, the majority of the urban poor lives in self-built homes. Self-help construction employs mainly the unpaid labour of the family and friends, while resorting to the services of skilled artisans for some specialized services; building materials are usually purchased on the market, at least in part. Once more, we are in presence of a mix of non-market-cum-market form of an important economic activity. Even middle class people often use their spare time and all sorts of 'do-it-yourself' kits to repair, expand or beautify their homes instead of contracting the services of a firm. Whether they act in this way for economic reasons or out of a more complex cultural motivation need not be discussed at this stage.

In the passage referred to above, Hicks considers that the experience of market forces has transformed the Revenue Economy, i.a. by "offering it opportunities for economic calculation, which in the primitive Revenue Economy must have been almost wholly lacking". Is economic rationality exclusively predicated on the exchange value, as implied in the above statement?

Such a reductionist view is contradicted by the growing body of literature on peasant economies pioneered by the writings of Chayanov(6). In his important study of the Polish feudal economy, Kula has shown that economic choices were made without passing through monetary common denominator, so to say by reasoning directly on use values and by considering different options

Figure 1

The 'real' economy



(1) Commoditized sector (wage labour, product sold on the market)

(1bis) informal markets

(2) household sector (labour and product don't pass through the market)

(2bis) social sector (collective non-market production) and quasi-markets

(3) public sector (wage labour, product distributed freely)

(4) petty commodity economy (self-employed producers, marketed product)

for the allocation of the work-time available within the peasant family. There was indeed little use for money, and for thinking in monetary terms, in an economy based on the interplay between market-oriented (but subsistence self-sufficient), manors and predominantly subsistence-oriented peasant farms, compelled to supply the manor with unpaid labour (corvée) and spending whatever little money earned on liquor and beer produced in exclusivity by the manor(7).

Furthermore, production and consumption within the peasant family, as well as work and nonwork activities were tightly interwoven. Economy was still embedded in social relations, to use Polanyi's terms(8), autonomous activities were preferred to heteronomous work(9), the political and institutional economy could not be separated from the moral economy. This is, as a matter of fact, a situation still prevailing today in many configurations based on the mixed market non-market form. A recent study found that there is a significant territorial segmentation of the labour market in some clusters of villages in West Bengal: labourers often do not go to work in adjacent villages where the wage rate may be higher, or do go to work to villages where the wage is lower. Patron-client relationships between employers and employees based on considerations of trust, credit, familiarity and dependability may thus constrain the development of an open, competitive labour market over contiguous villages. According to the authors of the study, "these relationships, viewed in a long-run perspective, are not necessarily economically irrational and may even be regarded as a rational response to imperfect information on worker characteristics, costs of enforcement of contracts with unfamiliar people, and the general absence of credit and insurance markets"(10).

At any rate economic analysis should not eliminate from its field a whole series of non-rational behavior patterns. Nor should it seal itself off against any substantive evidence by transforming its assumptions and concepts into postulates(11). The distinction between economic and non-economic factors is meaningless. In Myrdal's words "from a scientific point of view, the only demarcation that is logically tenable when building our models is between relevant and less relevant factors"(12).

In order to capture the relevant qualitative information on the working of the market/non-market mixed forms, an institutional and anthropological analysis is called for along a line somewhat parallel to the one followed by Herbert Simon in his study of decision making in business organizations(13).

° ° °

The 'real' economy can be seen as a lattice of segmented yet interconnected labour and product markets and non-markets (see figure 1). The two basic labour-product configurations are: the commoditized economy and the non-market household economy (arrows 1 and 2).

Now, side by side with the organized sector of the commoditized economy, operated by enterprises -large and small, public and private(14)- complying with all the legal, fiscal and administrative regulations of the labour and product markets, there exist several 'informal' markets (arrow 1 bis) which

Figure 2

Time allocation and choice

Configurations

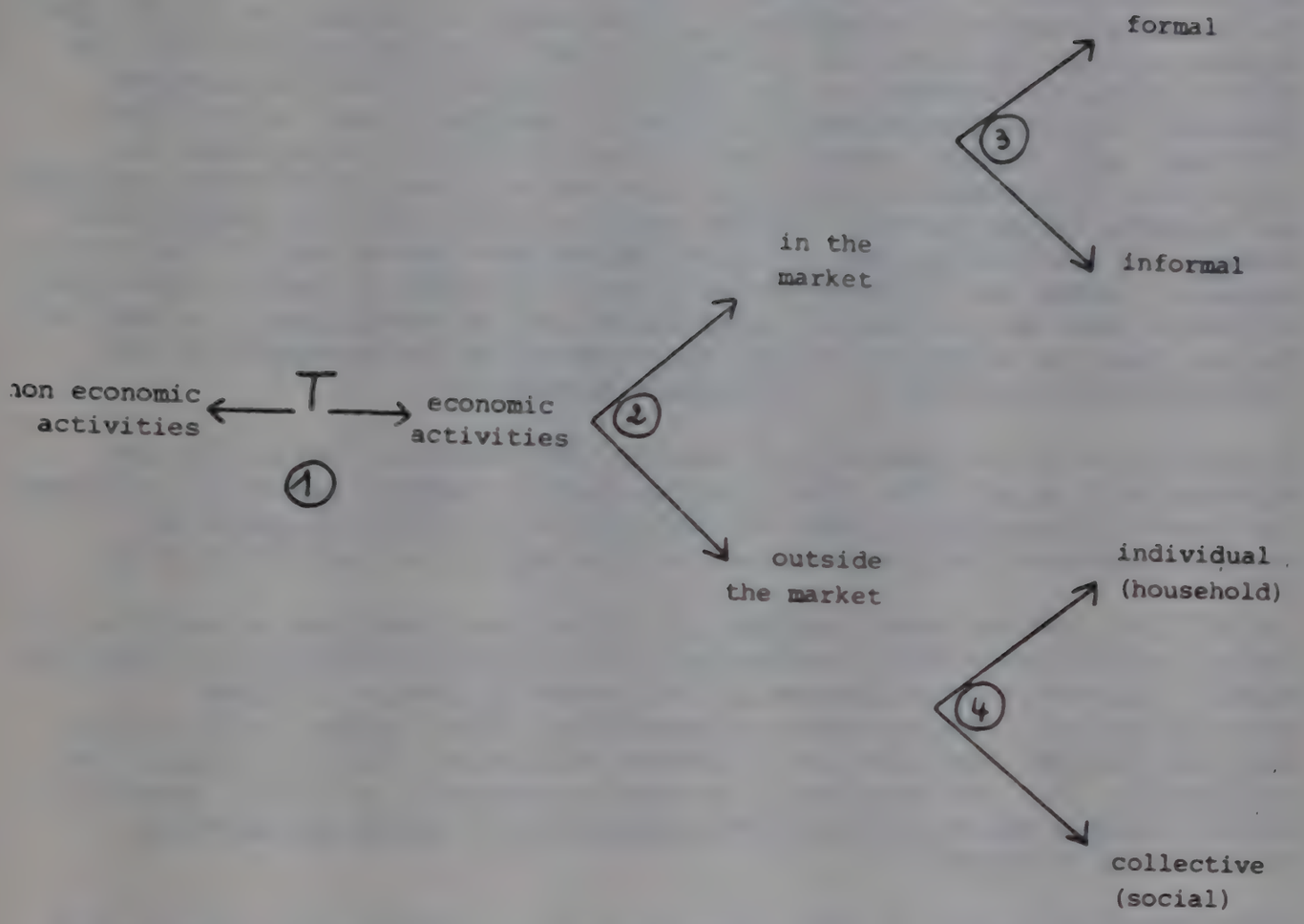


Figure 3

Uses of income

M
5
- consumption
- investment in 'durables' (household producer goods)
- savings
- (taxes)

can be classified according to their degree of illegality, ranging down to the crime syndicates. A neighbouring segment of the labour market, usually included in the definition of the informal sector, is the group of self-employed (arrow 4): strictly speaking the latter are not on the labour market, however the produce of their work comes to the product market.

The 'informal' sector is often referred to as 'hidden' or 'invisible'(15). A better term would be 'statistically unrecorded', as most of the activities in the market segments encompassed by these names are conducted in the open. Anyhow, neither the dichotomy 'formal/informal' nor the 'open/hidden' one offer a suitable framework to describe the lattice of the real economy. Moreover, they let themselves to statistical manipulations, as both the 'informal' and 'hidden' sectors are in reality residual categories. By definition, they comprise everything that has not been specifically recorded as belonging to the narrowly defined organized sector of the commoditized economy. By postulating that all those who do not find a regular job in the organized sector are absorbed by the informal economy, it becomes possible to assume away the problems of unemployment and underemployment, as well as to play down the disruptive social consequences of the emergence in the industrialized countries of a 'two-gear' economy(16).

By contrast with the commoditized economy, the household activities are situated both outside the labour and the product markets (arrow 2), although the household consumption consists obviously of a bundle of goods and services purchased on the market and self-produced (see below figure 4).

In addition, the non-market segment of the economy comprises in addition the social sector (arrow 2bis) consisting of all collective activities organized outside the market by neighbourhood and community groups, citizen associations and, in some cases, cooperatives. Their common trait is that they are founded, just like the household sector, on the principle of the reciprocity, i.e. the donation of an unpaid productive activity, deemed of social interest and matched by free consumption of goods and services collectively produced(17).

James Robertson speaks in this connection of "the progressive localisation of the welfare state" consisting of the collective self-provision of a growing range of goods and services, previously provided by the public sector and which offer a potential scope for community contracting(18).

A natural extension of the social sector are the quasi-markets, i.e. local exchange arrangements functioning without money.

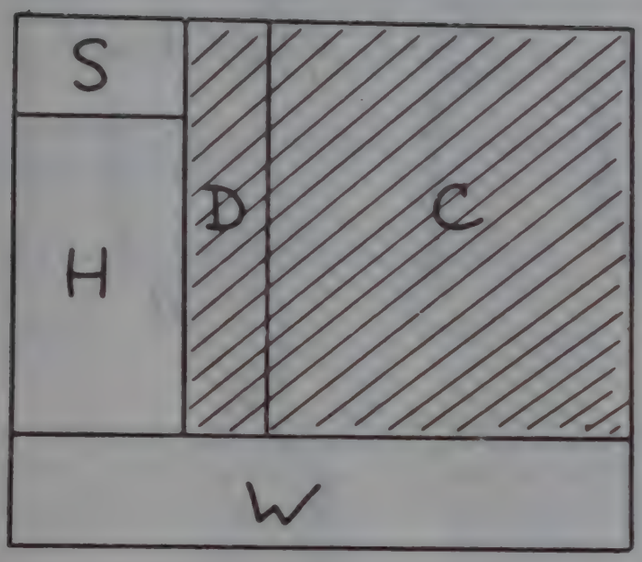
For sake of completeness, we ought to mention the public sector (arrow 3) providing free goods and services, produced by public servants who earn wages just like the workers of the commoditized sector.

. . .

The lattice of the real economy provides a suitable framework to address the question of choice configurations open to individuals, households or extended families with respect to the allocation of their time and incomes

Figure 4

Consumption structure



1) goods and services purchased through the market :

C - consumer goods and services

D - 'durables' (household producer goods)

2) goods and services produced outside the market :

H - household

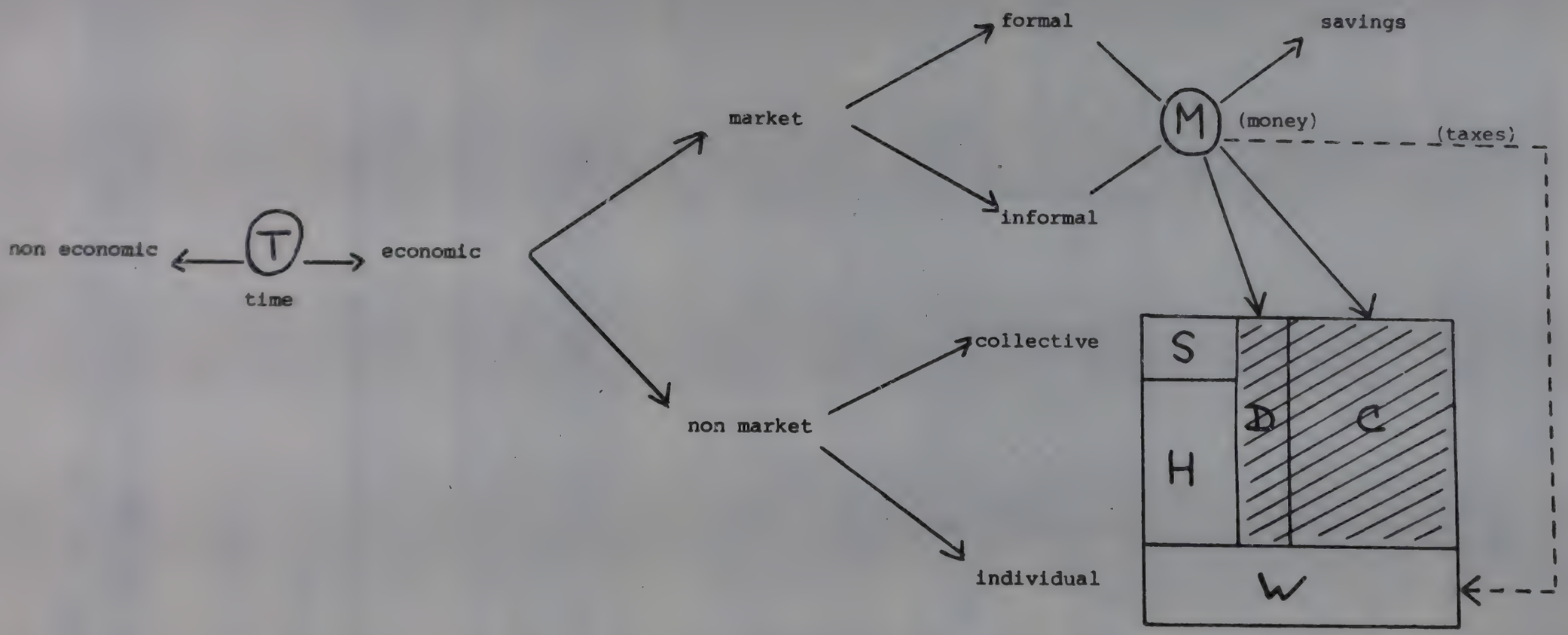
S - social sector

3) public goods and services :

W - welfare

Figure 5

Structure of everyday life



and the resulting consumption and life-style patterns. In other words, anthropological economics should unfold into a generalized consumption theory, in which consumption is simultaneously described in terms of bundles of goods and services purchased on the markets and/or self-produced as well as in terms of patterns of time-use.

Two equally reductionist temptations must be avoided: putting a price tag to time and reasoning exclusively in terms of time allocation.

We shall use, however, the latter as an entry point.

Four choice configurations are theoretically open to, whatever the case, the individual, the household or the extended family (see figure 2):

- how much time for economic and non economic activities?

- the apportionment of time of economic activities between the market and the non-market;

- between the formal and the informal markets;

- between the household and the social sectors for non-market activities.

In practice these choices are constrained by institutional, cultural and conjunctural factors. But the range of choice configurations broadens pari passu with the increases in the overall productivity of the economic system and the reduction of work time required to produce the necessaries of life.

Now, the time spent on market oriented activities generates a flow of income, whose alternative uses are listed on figure 3. The purchase of 'durables' is in reality an investment into household producer goods rather than a consumption expenditure(19).

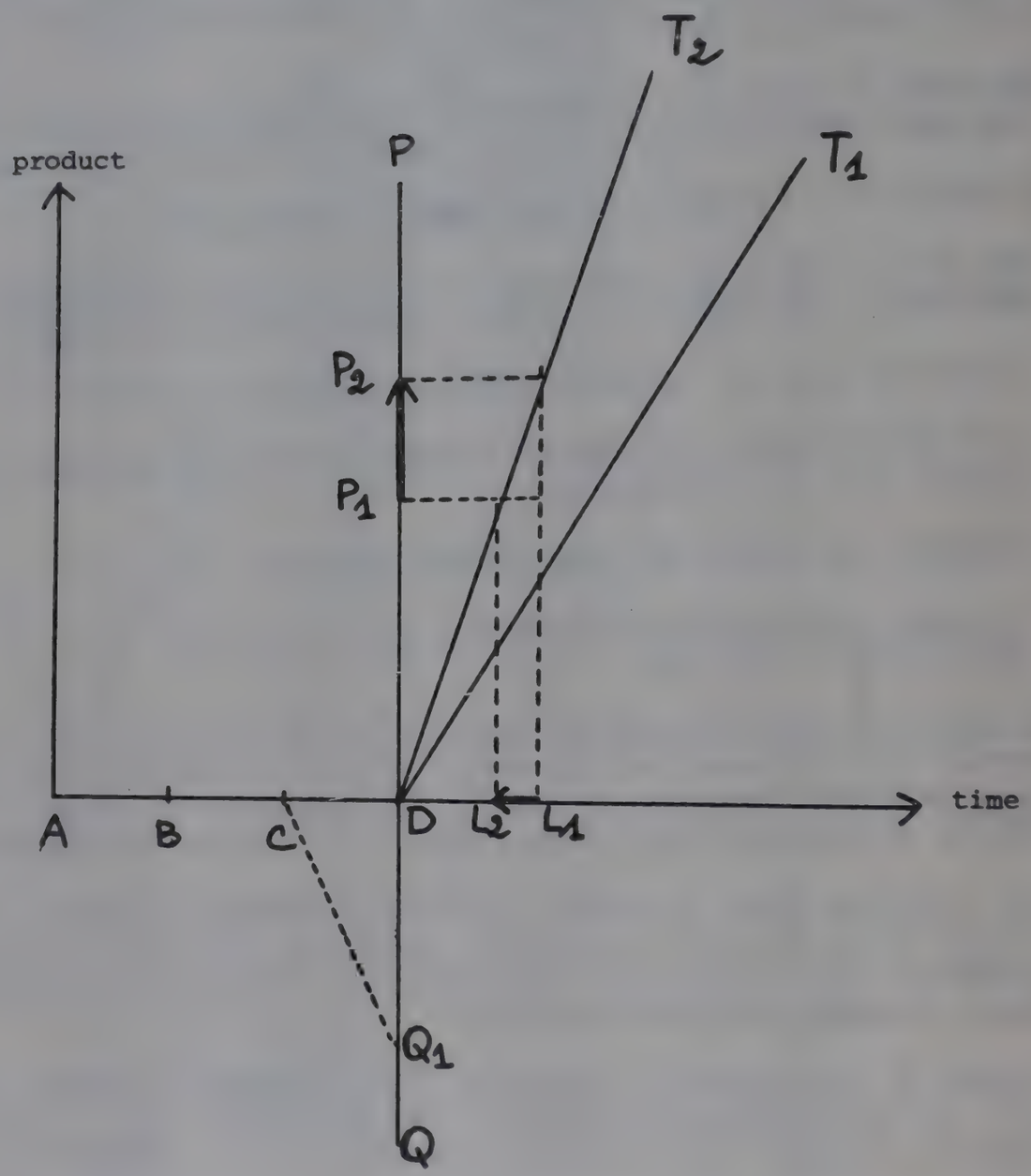
Insofar as the productive capacity of the household depends, at least in part, on such previous investment, the household sector in our modern economies becomes increasingly 'colonized' by the commoditized sector.

The consumption structure is conditioned by the choices made both with respect to time and income allocation (figure 4). It consists of goods and services purchased through the market, self-produced and freely distributed by the government which finances them out of taxes.

Figures 2 to 4 are combined in the diagrammatic presentation of what might be called the 'structure of everyday life'(20) in which each of us is immersed (figure 5).

Figure 6

The sharing of increased productivity



A B - rest time

B C - non-economic activities

C D - non-market economic activities

('quasi-product' D Q_1)

D L_1 - wage labour ⟶ D P_1 product

The shift from technology T_1 to technology T_2 may materialize in an increase P_1 P_2 of the product or a decrease L_1 L_2 of the work time.

The type of analysis suggested in this paper can be related to A.K. Sen's important reconceptualization of the development theory in terms of entitlements and peoples' capabilities(21), based on the rejection both of the utility-based welfare economics and of the fetichism of the commodity forms. It is submitted that the identification of the choice configurations in time and income allocation, relative to market/non-market options, has relevant policy implications for the mapping out of alternative entitlement bundles and for the design of policies to deal with structural unemployment. This is true not only for the Third World but also (and perhaps even more so) for the industrialized countries. The central question for the latter is the sharing of the increases in productivity between more commodities and less work time, more equitably distributed so as to avoid the 'two-gear economy' (figure 6). The decrease of the time spent on market oriented activities(22) would translate itself into more time available for non-economic activities (BC) and/or for the non-market economic activities(CD).

Finally, at a more theoretical level, the broadening of the scope for a substantive enquiry on the working of the real economy and peoples' strategies aimed at survival and good life leads to the yet little explored borderline between the political and the moral economy.

Paris,
September 1986.

NOTES

(1) FEI HSIAO TUNG and alii, 1986, Small Towns in China-Functions, Problems and Prospects, New World Press, Beijing, p. 180.

(2) This is an open and highly debatable question that should be carefully examined by Third World planners confronted by the staggering social costs of large scale urbanization.

(3) See, i.a., the publications of the Food-Energy Nexus Programme of the United Nations University.

(4) HICKS, John, 1969, A Theory of Economic History", Oxford, Clarerdon Press, p.23-24.

(5) See CLASTRES, Pierre, 1974, La société contre l'Etat, Les Editions de Minuit, Paris.

(6) See KERBLAY, Basile, 1964, CHAYANOV, A.V., "Un carrefour dans l'évolution de la pensée agraire en Russie de 1908 à 1930", Cahiers du Monde Russe et Soviétique, 1964, n°4, pp.411-460 et THORNER, Daniel, 1966, "Une théorie néo-populiste de l'économie paysanne: l'Ecole de A.V. CHAYANOV", Annales: Economies, Sociétés, Civilisations, 1966, N°6, pp.1232-44.

(7) See KULA, Witold, 1983, "Teoria Ekonomiczna Ustroju Feudalnego", second expanded edition, "Ksiazka i Wiedza", Warssw and "Money and the Serfs in Eighteenth Century Poland", in Peasants in History , 1980, Oxford University Press, New Delhi, pp. 30-41.

(8) See POLANYI, Karl, (1944)1957, The Great Transformation, Beacon Press, Boston.

(9) "Better one's own duty, (even) imperfect
than another's duty well performed"

Bhagavad Gita

(quoted by S.A. MARGLIN, "What do Bosses do again? An Essay on the Moral Economy of Work", 1986, WIDER/UNU, Helsinki (mimeo).

(10) BARDHAN, P. and RUDRA, A., 1986, "Labour Mobility and the Boundaries of the Village Moral Economy", The Journal of Peasant Studies, Vol. 13 n°3, April 1986, P.114.

(11) KAPP, K.W., Toward a Science of Man in Society, 1961, Martinius Nijhoff, The Hague, pp.32 and 35.

(12) MYRDAL, G., 1975, Against the Stream-Critical Essays on Economics, Vintage Books, New York, p.89.

(13) Cf. "The principal source of empirical data about organizational decision-making has been straightforward 'anthropological' field study, eliciting descriptions of decision-making procedures and observing the course of specific decision-making episodes". SIMON, H.A., 1979, "Rational Decision-Making in Business Organizations", The American Economic Review, Sept. 1979, Vol. 69, n°4, p. 501.

For a more detailed justification of the need for an 'anthropological economics", see, SACHS, I., 1984, Développer les champs de planification, Université Coopérative Internationale, Paris.

(14) Even cooperative enterprises should be included here rather than put in the social economy, defined as operating outside the market. Rigorously speaking there is a market component and a social economy component in the activities of the cooperatives.

(15) The Italians speak of 'economia sommersa' which corresponds to our arrows 1bis and 4. For a review of all these concepts and of the literature see GALDIN, Jocelyne et SCHIRAY, Michel, "L'économie cachée en France: état du débat et bilan des travaux", Revue Economique, Paris, Vol.35, juillet 1984.

(16) A more straightforward way of describing this phenomenon would be perhaps to speak of the emerging 'apartheid economy'.

(17) See KOLM, Serge-Christophe, 1984, La bonne économie - La réciprocité générale, Presses Universitaires de France, Paris.

(18) ROBERTSON, James, 1986, "The Economics of Local Recovery" (TOES 1986, London, mimeo).
Community contracting is a mixed case between arrows 2bis and 3.

(19) Just like investment in housing.

(20) This term suggested by the title of F. BRAUDEL's book is used here to encompass the entire field of a generalized consumption theory.

(21) See SEN, A.K., 1983, "Goods and People" (Seventh World Congress of the International Economic Association), reproduced in SEN, A.K., 1984, Resources, Values and Development, Basil Blackwell, London.

(22) The 'Path to Eden', the title of a book by André GORZ, Les chemins du paradis: l'agonie du capital, Ed. Galilée, Paris, 1983.

SMALL SCALE INDUSTRY IN RURAL AREAS.
THE SPANISH EXPERIENCE SINCE THE BEGINNING OF THIS CENTURY

Antonio Vázquez-Barquero

Universidad Autonoma de Madrid

and

Instituto del Territorio y Urbanismo, MOPU, Madrid.

Paper to be presented at the 8th IEA World Congress

New Delhi, India 1 - 5 December, 1986

1. INTRODUCTION

Economic growth and structural change in Spain have so far been analyzed mainly through the traditional growth concentration/diffusion model. Economic development would have, according to this model, taken the form of urban based industrial growth, led by big enterprises. Rural areas would have taken part in the industrialization process only because of industrial diffusion from metropolitan areas.

This paper, however, presents a different approach to Spanish economic growth. The process of industrialization in Spain started before its Industrial Revolution, and local industrialization is one of the features of the formation and development of its production system. The industrial concentration process takes place, when industrial production had begun in small rural centers and manufacturing activities were diffused in rural areas.

Local development processes have been made possible thanks to a set of economic, institutional and socio-cultural factors that stimulated local communities to solve their own problems. When the Industrial Revolution was completed, and modern economic growth achieved, two paths of growth stand out: One, the urban-industrial concentration/diffusion model; the other, decentralized rural industrialization model.

The aim of this paper is to show that local industrialization is a real and viable development strategy, which can inspire industrial and regional policies. After defining local industrialization as an alternative growth pattern, and pointing out that industrialization in rural areas has been, in fact, a hidden development strategy of the Spanish economy, we discuss how present technological change creates the conditions that favor the use of this development strategy. The paper finishes with a few remarks on the general characteristics of a strategy for local development.

2. LOCAL INDUSTRIALIZATION, A STRATEGY FOR ECONOMIC DEVELOPMENT

During the sixties and seventies, polarized growth and diffusion of development "from above" constituted the predominant theoretic paradigm on which the growth strategies were based (Robert, 1982). Growth was made possible through the expansion of (large) industrial firms, focused in (large) cities, given that the technological innovations (within the production methods, energy and communications) allowed for external and scale economies.

Industrial diffusion begins when the rise in the price of the labor force and other "inputs" distort the firms' costs structure, the agglomeration diseconomies increase and the information and communication economies reduce costs' spatial differences. The firms react, and alter their location strategy seeking new areas where the factors prices are lower and where locational advantages exist, that will permit them continue to compete within the markets, maintain the profit rate, and continue the capital accumulation process.

The concentration/diffusion growth model has been amply theorized, and development "from above" has become for decades the main spatial strategy, both in advanced and developing countries (Gore, 1984). Since the late sixties, changes in demand, the continuous increase in costs and the growing presence of NICs in international markets alter, to a large degree, this pattern. The introduction of new technologies and the changes in the firms' organization transform the production processes, modify the plants optimum size, reduce industrial employment, change the firms strategies and their location pattern. As a result, the spatial movements of the productive factors (capital and labour, above all) are reduced and the traditional mechanisms of diffusion are weakened. It is then that criticism of the development "from above" model grows.

It has often been said that the traditional concentration/diffusion model tends to generate important disfunctions in backward regions (Stöhr, 1985). On the one hand, it alters the functioning of the labor markets, introducing a

spatial dualism that stands out between developed and underdeveloped areas; besides this, it generates territorial exchange of products and factors, which reduce the development potential of the less developed regions; and lastly, it is accompanied by cultural and institutional transformations, with a relative high valuation of urban industrial growth. The strengthening of the spatial hierarchy encourages a regional growth differentiation, which leads to a bad development of rural areas, and in general, of peripheral regions (Guindani and Bassand, 1982).

The decline in level of acceptance of the paradigm of the development "from above" has recently impulsed the research that has contributed to the construction of the not well defined paradigm of development "from below". The attempts at defining local development and its theoretical links with regional development (Friedman and Weaver, 1979; Sachs, 1980 & 1983; Stöhr, 1981 & 1985), and the interpretation of case studies on local industrialization (Fua, 1983; Vázquez, 1983) have permitted the (ambiguous) conceptualization of the endogenous development strategy (with important nuances, according to each author) and the use of an ever more precise terminology (endogenous potential, self-reliant or autonomous development, endogenous development).

One can find a particular productive system, labor market, entrepreneurial capacity, natural resource, political and social structure, culture and tradition within any territorial community. These resources are its endogenous development potential.

At a specific historic moment, a territorial group, of its own initiative, can find new ideas and projects that will allow them use their resources and find solutions to their problems. In a mixed market economy, the emergence of local entrepreneurship is a necessary condition for a path leading to autonomous development that starts or continues in a new direction. The capacity to lead their own development process along with the mobilization of the available resources on the area, of its endogenous potential, leads to a form

of development called endogenous development.

These concepts (endogenous potential, autonomous development, endogenous development) may be seen from any territorial scale. Nevertheless, when a community assumes its own impulse from its endogenous potential with a decided effort to exclude that foreign (inter-territorial) presence, that goes against local development, the outcome is a development "from below" strategy (Stöhr, 1981 & 1985).

But, how to specify local development strategy? A number of proposals have been formulated in recent years, among which we will mention the following: Johnson's strategy of market towns and rural growth centers; Rondinelli and Rudle's strategy of integrated regional development; Sach's ecodevelopment strategy; Stöhr and Tödtling's strategy of selective spatial closure; Friedman and Douglas's strategy of agropolitan development (Gore, 1984).

My purpose here is not to summarize each of these proposals. I wish only to point out that the majority of them advocate an alternative development strategy capable of overcoming the failure of the accelerated and polarized industrialization strategy. As Stöhr and Taylor say (1981), "development from below strategies are basic-needs oriented, labour-intensive, small-scale, regional resource-based, often rural-centred and argue for the use of appropiate technology."

It may prove interesting to comment, in passing, on the agropolitan development strategy of Friedman and Douglas for its representativeness. Friedman and Douglas advocate a development strategy for the Asiatic countries that will integrate rural with urban development, the country with the city. To do this they find it necessary to create local economies, with their own local market, parallel to that of the export economy, internationally competitive. The objective of the local economies is the satisfaction of the local communities basic needs through self-centered development and the promotion of its own capabilities. Among their proposals, the following stand out:

- The creation of agropolitan districts, around towns of between ten and twenty-five thousand inhabitants. Investment efforts should promote social facilities, infrastructures, agricultural improvements and labor intensive light industries.

- Devolution of power to the local governments and change within the public financial system, so that each district has sufficient autonomy, and the necessary resources in order to undertake its own development.

- Agricultural reform that will guarantee a control of the wealth on behalf of the members of each local community. Agriculture should be regarded as the propulsive sector of the economy.

- A commitment by the central government to support the development projects with financial, material and technical resources; to assure inter-territorial equity in the allocation of resources and to maintain the macro-economic balance that will allow the system to work.

Although proposals such as these are attractive alternatives to the traditional policies of diffusion, they have serious limitations that obeys the weakness of the analysis under which they have been outlined, and they are highly utopian. It's not only that the concept of agropolitan development is rather ambiguous and that the implementation of this strategy is always left undefined; the problem is mainly that this kind of proposal is hardly workable.

One wonders how developing countries can finance this type of program, which need large investments in infrastructure, in basic and intermediary industries without increasing foreign dependence? How can local economies function with a market isolated from the rest of the country's economy, which is considered to be integrated within the international economic system? How are the objectives of equity and improvement in the standard of living going to be achieved? In any case, this kind of strategy is not a viable proposal, given that it is likely that its implementation would give rise to a network

of small rural communities, with low development levels.

In my opinion, the endogenous local development strategy is viable when it tries to foment an increase in the standard of living, without trying to isolate the local communities from the context defined by the national economic system. The effort should be focused towards progressive change in the productive system of each local community, on the basis of their own capacities, of their endogenous potential, following a local industrialization pattern such as the one that is actually in use in some recently industrialized countries like Spain.

In this context, we can be more precise about the concept of local development strategy: Local development is a process of economic growth and structural change that results in an improvement of local population standards of living (Coffey and Polese, 1985). At least two dimensions can be identified: one, economic, in which local entrepreneurs use their capacity for organizing local resources with a sufficient productivity level as to be competitive in the markets; another, socio-cultural, in which local values and institutions serve as the basis for the development process.

Local development strategy should consider a third dimension (Stöhr, 1985), the political-administrative dimension, in which territorial policies permit the creation of a local economic climate, protect it from external interference and favor and protect the development of local potential.

3. LOCAL INDUSTRIALIZATION IN SPAIN, A STIMULATING EXPERIENCE

Stöhr and others have felt the scepticism of the profesional and international institutions when putting forth local development strategy. Nevertheless, recent research (Vázquez, 1983; Estudios Territoriales, 1984; ITUR, 1986) shows that local industrialization and development is a reality in recently industrialized countries like Spain.

Local development experiences are vastly different from each other,

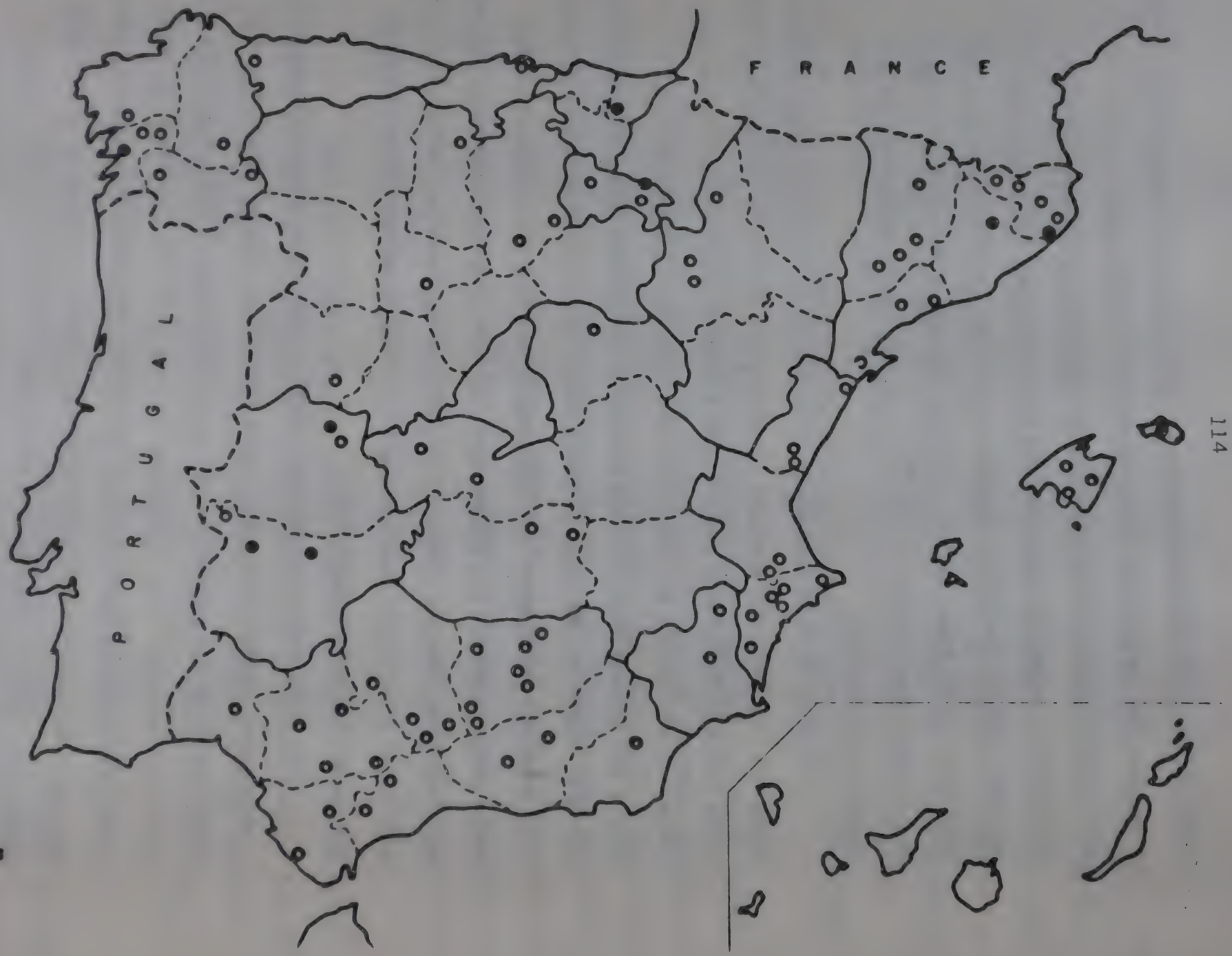
which is why it is difficult to give a definition that represents the variety of cases. When we speak of local development in Spain, however, we refer to sets of entrepreneurial experiences in industrial activities. They have developed by using the local (mainly human and financial) resources, and in any case without the direct intervention of the Administration. They are located in small rural centers scattered throughout the territory. Small-scale rural firms produce mainly for a market located outside the local community boundaries.

In order to know more about local industrialization in Spain the Institute for Territory and Urbanism (Instituto del Territorio y Urbanismo; ITUR, 1986) has just finished a research which permits quantify, to a certain extent, the phenomenon, and define it more precisely. The objective was to make a map showing which are the endogenous development areas and what is the specific weight of the local industry. The research was established starting from a set of quantitative and qualitative variables and indicators, that would permit quantify the process that has been previously identified through pilot stidies (Vázquez, 1983). To do this, use was made not only of the available local statistical information, but also local experts helped identify the local industrial experiences.

The first conclusion of this study is that local industrialization is a phenomenon extended throughout Spain (Map 1). It affects eighty-three different zones in the penninsula and islands which adjust quite closely to the above definition of local industrialization. Industrial employment in these areas represents at least a 10% of the active population of Spanish industry. The population affected by local industrialization is around 6% of the total population. This is significant, particularly if we keep in mind that the criteria used in the research were very restrictive.

Only municipalities with more than 1,000 inhabitants were studied, with the exception of those included within a distance of 70 Kms. of Madrid and

MAP 1. LOCATION OF THE ENDOGENOUS INDUSTRIALIZATION AREAS AND MUNICIPALITIES



Barcelona and of 25 Kms. of those cities with more than 100,000 inhabitants. This is too strong a restriction, given that, even in some of the Spanish Metropolitan areas local endogenous industrialization processes have been historically identified. On the other hand, only centers with industrial employment of over 10% of total employment, and with a minimum of 0.5 Kilowatts per inhabitant of power capacity installed in a municipality were considered, which excludes local development processes that eventually begin or disappear.

By typifying the local development areas with respect to criteria such as the provincial industrialization level, the relation to the agricultural sector and the productive specialization, certain common features arise (Table 1): A large part of the local development areas are located in provinces with low and medium levels of industrialization (this result has been parcially influenced by the restrictive methodological criteria used in the research), areas specialized in one industrial activity are more frequent and the dependence on agricultural resources is limited at present (2% of the cases).

On the basis of this research it has been possible to draw a map of the endogenous industry, that shows a significant territorial diffusion. Although a relative concentration of local industry exists in the Mediterranian coast (Gerona, Alicante and Murcia represent the higher levels of endogenous employment), the Basque country (mainly Guipúzcoa) and the Ebro Valley axis (Navarra, Rioja and Tarragona), important experiences exist in the inland areas (such as Albacete, or Toledo), in Galicia (Pontevedra), and numerous cases in Andalucia (see Map 2 for the identification of regions and provinces).

On the other hand, local endogenous industrialization is one of the basic supports of the industrial system of important areas of intermediate industrialization (Alicante, Gerona, Castellón, Baleares, Navarra, Rioja) and of weak industrialization (Jaen, Albacete, Murcia, Burgos, Toledo, Badajoz, Ciudad Real and Córdoba), which gives it a strategic role in the productive structure (Table 2 and Map 3).

TABLE 1

Clasification of Local Development Areas

Level of provincial Industrialization		HIGH		MEDIUM		LOW	
Dependence on local Agricultural Inputs		Dependent	Non dependent	Dependent	Non dependent	Dependent	Non dependent
AREAS	Strong Industrial Specialization	Ribera de Ebro Tortosa-Amposta La Selva		Santoña-Laredo Molina de Segura Ejea de los Caballeros Quintanar de la Sierra El Barco-Ponferrada Ría de Arosa Mollerusa	Medina Campocuellar Pedreguer-Gata Ontinyent Elda-Petrel Crevillent Illueca-Brea Arnedo	Morón S. Vicente de Alcántara Valle del Jerte Vega Alta Vega Baja Benaojan-Montejaque Olula-Macnel	
	Industrial Diversification		Alto Deba Olot Ripoll Plana de Vic Banyoles El Vendrell		Alcoi Vinaroc-Benicarló Onda-Alcora Xátiva		Alcázar de S. Juan Socuéllamos-Almansa Menorca Linares-La Carolina
MUNICIPALITIES	Strong Industrial Specialization		La Bisbal Taramundi	La Seu d'Urgell	Guissona Nájera Aguilar de Campoo La Estrada Vall d'Uxó Xixona Ibi Yecla	Gilena Purullena Huétor-Tajar Alcaudete	Alcalá la Real Navalmoral de la Mata Ribadavia Sarria Manacor Bailén Ubeda Mancha Real P. Genil Béjar La Rambla Priego Ubrique Chiclana Estepa Castilleja Inca Llucmajor
	Industrial Diversification				SigÜenza Sonseca Aranda de Duero Lalín Valverde del Camino Talavera de la Reina Tárrega Calatayud Padrón		Campillos Andújar Lucena

MAP 2. REGIONAL AND PROVINCIAL DIVISION OF SPAIN

TABLE 2

LOCAL ENDOGENOUS EMPLOYMENT IN PROVINCIAL INDUSTRIAL EMPLOYMENT

Per cent of local endogenous employment in industrial employment	Provinces with more than 100,000 industrial employees	Provinces with between 100,000 and 75,000 industrial employees	Provinces with between 75,000 and 50,000 industrial employees	Provinces with between 50,000 and 25,000 industrial employees	Provinces with less than 25,000 industrial employees
More than 25%	Alicante Murcia	Gerona Castellón	Baleares	Jaén	Albacete
Between 25% and 15%		Navarra		Burgos Rioja Toledo Badajoz C. Real Córdoba	
Between 15% and 5%	Guipúzcoa Zaragoza	Coruña Pontevedra	Cantabria Tarragona Valladolid Cádiz	Lérida	Lugo Orense León Palencia Salamanca Segovia Soria Almería Cáceres
Less than 5%	Madrid Vizcaya Barcelona Valencia Sevilla	Asturias	Alava Málaga	Granada	Zamora Avila Huesca Teruel Guadalajara Cuenca Huelva

MAP 3. LOCAL ENDOGENOUS EMPLOYMENT IN PROVINCIAL INDUSTRIAL EMPLOYMENT.

SOURCE: ITUR, 1986

Besides this, the research has shown that local enterprises produce a wide range of mature industrial goods from food products, textiles, furniture, shoes and ceramics to machine tools, equipment and plastics. Local industrialization is based on small and medium-sized production units, with an important contribution made by family-run and cooperative enterprises.

The number of local firms in any one area or municipality varies. A high concentration of firms have been found in some cases: more than one hundred firms in the Alto Deva, Olot and Ribera del Ebro, and more than two hundred in towns like Ubrique or Yecla. The local firms' average size is above that of the national average (fourteen workers per firm, according to the 1978 census) as shown in the cases of Arnedo, Bejar, Santoña and Sonseca (local firms' average size between 24 and 45 workers by firm). But in the case of Mahon, Ubrique or Yecla the local firms average size is under the national average.

How did local industrialization begin? Which are the factors that have favored local development? Local industrialization is a process, whose birth, development and maturity is based on a combination of causes that go from necessity (case of the Vinalopó Valley in Alicante, where during the mid XIX century phylloxera distroyed the vineyards, the main productive activity of this area), to the availability of natural resources (case of Olula-Machael with marble) and/or good locations (case of Aranda del Duero, traditional market center in Castilla). As previously mentioned, all of these processes have started spontaneously without public intervention, and contain both an economic and socio-cultural dimension.

The local industrialization process begins with the transformation of traditional productive system. The existence of a certain entrepreneurial capacity, an abundant and cheap labor force, a consolidated social structure, a practical knowledge of products and markets, the availability of some savings coming from the entrepreneurs' previous activity (agricultural and/or

commercial) and in certain cases, a good location; allows the industrialization process to start, and so, satisfy a need for change that was felt at the local level. Occasionally, the process has been favorably influenced by the fact that local resources were highly valued within the markets (Vázquez,1983).

The birth and continuity of the endogenous industrialization process requires an active and creative attitude on behalf of the local entrepreneurs which permit them overcome the obstacles that the process underway implies. In any case, the existence or creation of a (local, regional and/or national) market is a necessary condition for maintaining the development process. It is precisely its capacity of adapting to changes in the demand, and its answer to greater competition within the markets, which has permitted the local firms' systems to adjust relatively easily, when the initial economic conditions have been substantially transformed.

Today, local firms are present in national/international markets with a large range of products and they are competitive with the firms of both developed and new industrializing countries. Nevertheless, only a few firms within each zone produce for international markets, except for more developed areas such as the Alto Deva, Santoña, Illueca-Brea, Inca or Elche. The volume of exports is not usually above 20% of local production, and frequently, only reaches the 10% mark.

Moreover, we must add that local industrialization has developed only in areas with important socio-cultural features. We can mention, among others, the following: In the first place, a strong and profound sense of both local identity and of pride in their own culture and traditions; secondly, the recognition of local initiative and entrepreneurial capacity as a positive social value within the community; furthermore, the existence of traditional family structures with strong inter-generational ties, that makes the family an income and labor unit (the basis for savings generation and the maintenance of relatively low wages); also, the existence of a social organization in

which commercial exchange and monetary relations have been sufficiently well developed.

4. RURAL SMALL-SCALE INDUSTRY AND SPANISH INDUSTRIALIZATION

The Industrial Revolution in Spain has been a long slow process, of which the initial steps may be placed in the second half of the XIX century. It begins with the formation of the national market and with the attempt to form an industrial market. It is not completed until the second half of the XX century, however, when strong economic growth rates and structural changes are produced, favored by the interaction between endogenous and exogenous forces in the process of capital accumulation (Fua, 1980).

The role played by local industry within the industrialization process in Spain has not yet been studied sufficiently, due no doubt to the negative effect of the modernization theory on the studies of economic history in general (Mendels, 1984), and the predominance of quantitiative aspects in the definitions of industrialization (Crouzet, 1975). Despite this, an attempt can be made to relate small-scale industry in rural areas to the Spanish industrialization process.

Spanish industrialization begins before the diffusion of the factory system in the Spanish economy, under the cloak of diffuse industry in rural areas. Carande (1977) pointed out that already in XVI century Castilla, the manufacturing activity was spread out in the countryside. The transformation of rural industry in a process of local industrialization is the next step, when in the late XIX century machinery is introduced in the Spanish productive system. The failure of the Industrial Revolution, however, at the beginning of the XX century, permited local industrialization to consolidate itself, and so become one of the pillars of the Spanish industrial system.

i) From Rural Industry to Local Industrialization

During the XIX century, the formation of the national market in Spain takes place with the loss of the Colonies and the construction of the radial system of railroads (initiated in 1847) and roads. The basis for the iron and steel industry are laid down (at the end of the century in the Basque country) as well as for the transformation industry, though the most dynamic sector is that of textiles, mainly in Cataluña (Tortellá,1975 and Nadal,1973).

Though the process of industrialization takes on a strong impetus in Spain during the 1870's (industrial jump), the industrial sector is of little importance at the end of the period. Following the census, in 1900, 68% of the active population was employed in the agricultural sector, while 16% was in the industrial sector. Nevertheless, small scale industry and decentralized industry in rural areas was very important during this period.

Before the Industrial Revolution took place in Spain, an important part of the rural population worked in the production of metallurgical products, textiles, or leather transformation, using manual production methods for their later sale in non-local markets. In these cases, the work in rural manufacturing was frequently on a part-time basis with agriculture. The Spanish experience adjusts quite well to what has been termed by Mendels and others as proto-industrialization.

Many local industries in Spain have emerged as rural industrial activities, even though the origins of local industrialization only go back to the previous century. Thus, of the twenty-one cases studied in the ITUR report (1986), fourteen began their industrialization process before the XX century. We can mention, among others, the following examples: The elaboration of chocolate pastries in Aguilar de Campoo, begun at the end of the XIX century; steel weapons production in the Alto Deba since the mid XIX century; the creation of the first textile factory in Béjar in 1784 (Jewish handicraft); gold and silver work in Mahon during the first half of the XIX century; leather transformation started in Ubrique

during the early XIX century.

During the XIX century, a large part of the Spanish rural industry adjusted to the putting out system, as is shown by the textile industry. Pascual Madoz identified 13,121 looms for weaving throughout 3,117 municipalities (of a total of 9,000) having some textile production in the mid XIX century (see Map 4). Often, these textile activities tended to disappear as the factory system was adopted, as happened in the case of Galicia, where during the mid XIX century some textile activity was recorded in 923 towns, the greater part of which disappeared during the first third of the XX century. In other cases, however, industrial activity focused on small scale firms within rural centers (Morella, Segorbe, Alcoy or Elche, in Valencia; a third of the two hundred villages of Cataluña). This gives rise to industrialization processes in these areas (Aracil and Garcia-Bonafé, 1978).

Among the factors that favored the transformation of rural industry into a process of industrialization in rural areas are the following: the existence of a local industry previous to the introduction of the factory system, the development of commerce (inter-regional and with the Colonies) of local products during the XIX century, the transfer of resources (financial and human) from the agricultural and commercial sectors to rural industry, and the late formation of the highly protected industrial market.

ii) The Formation of the Industrial Market

Apart from the consolidation of the national market, and the introduction of the capitalist mode of production within the agricultural sector, what really defines the first half of the XX century is the attempt to develop the industrial market. The expansion of the means of transportation, the reinforcement of protectionism (tariffs of 1891 and 1906) and the autarchic economic policies broadened the industrial product market, but the attempts fail due to the lack of competition, the lack of sufficient domestic savings and the difficulties generated by political disputes and the Civil War (Tuñón 1961).

MAP 4 DISPERSION OF TEXTILE INDUSTRY IN THE MID XIX CENTURY

SOURCE: ARACIL AND GARCIA-BONAFE, 1978, ACCORDING TO P. MADOZ

But, although in the early 1950's the Industrial Revolution was still not completed, the Spanish industrial space started to take shape in a "modern" sense, with the concentration of the new component of the industrial system in the urban areas and the consolidation of diffuse industrialization in rural areas.

The Spanish industrialization process takes on new strength during this period. On the one hand, during the first third of this century, the large number of small firms born in the Basque country during the decades 1880 and 1890 gave rise to important siderurgical, naval and metal transformation industries. They profit from its mining resources, financial means of the new banking system (built up after the loss of Cuba and the Philippines) and the transfer of foreign technology. The Catalonian textile industry is stagnant at this time, due to the loss of Latinamerican markets. On the other hand, the State begins to play a decisive role in the industrialization process, mainly after the creation of the National Industry Institute (Instituto Nacional de Industria) in 1941.

A strong spatial concentration of the industrial activity (within large plants) took place during this period. Perpiña Grau (1936) pointed out that during the 1930's there were serious tendencies towards concentration in a small number of centers (very important in Barcelona, Vizcaya and Madrid; important in Valencia, Guipúzcoa and Asturias, and less important in Santander Vigo Alicante and Málaga; and on a secondary plane in Sevilla, Córdoba and Zaragoza). The concentration process was based on an autarchic industrial and commercial policy, on the existence of short industrial markets, due to the low income levels and to protectionist policy, and on an expensive and deficient transport system.

Nevertheless, the processes of consolidation of rural industry and the deindustrialization of rural areas continued. Some small local industries, born during the previous period, were adapting very well to the technological

change that was filtering down toward the Spanish productive system. Local firms introduced modern machinery and produced new goods. Despite this, new industrialization processes in rural areas appeared as well. As examples of this we can mention the cases of the birth of the wood transformation industry in Lalín and Barra de Miño in Galicia and Yecla in Andalucia, or of marble transformation in Olula-Macael during the first third of the century, and the starting of the cooperatives in Mondragón and Guissona during the fifties.

The local industrialization process continues during this period, and the new system of urban firms overlap the traditional system of local firms because of a set of factors. On the one hand, the new products of these urban firms do not exclude the products of the rural firms from the markets because the domestic demand grows slowly due to the low income levels and to its bad distribution, and also because transport costs made the urban products significantly more expensive. Furthermore, an important part of the new urban products (naval industry, siderurgy or metal transformation) make up a range of products different from traditional rural goods. Lastly, the radial character of the transport system favors mainly the exchange between the large cities of the network; but this fact and the deficiencies of the communications allow the local firms to control important regional markets.

iii) Modern Economic Growth

During the last thirty years the Spanish economy has achieved what Kuznets has called "modern economic growth." It has passed through two well differentiated periods. The first, (up to 1973/75) was one of growth (annual GDP growth rate of 7 per cent during 1961/74) and structural change. The second (from 1974 onwards) is a period of crisis (unemployment rate increased progressively from 1.6% in 1974 to 22% in 1985).

The factors explaining the Spanish industrial development and the 1970's crisis of the industrial system, and the transformation of industrial

space have been studied elsewhere (Vázquez, 1986). What should be stressed here is the contribution of small-scale industry in rural areas to the transformation of the industrial system in Spain.

Above all, it should be pointed out that rural areas begin to be of interest as possible plant location since the early 1960's. The (large) urban industrial firms of the developed regions begin to increasingly appreciate location in diffusion regions and in non-metropolitan areas as a result of the progressive cost increase, the appearance of agglomeration diseconomies and the "liberalization" of the economic policy. The process takes on special force in the early seventies as a result of the changes in the demand of industrial products, the large increase in production costs and the increasing growth of modern services in the adjustment of the last decade (Vázquez, 1984b).

The industrial diffusion process, however, is due not only to the functional or productive decentralization or urban firms' activities which adopt a new location strategy. It is also due to the strengthening of the local industrialization process in rural areas.

The "liberalization" of the Spanish economy and the widening of the national market allowed local firms to use the existing potential within rural areas and attend national and foreign markets. In the sixties and seventies the competitive advantage of rural firms was basically due to the lower production costs in rural areas. The favorable conditions of the Spanish and international markets and the dynamism of local entrepreneurs allowed the small local firms' systems to strengthen despite the fact that economic and sectoral policies favored industrial concentration in only a few urban centers

During the last decade the system of local firms took on a greater momentum, not so much because the industrial crisis and urban deterioration gave a differential value to this industrialization pattern, but because of its better adaptation to the changing economic conditions. The leading local enterprises have changed their strategy. They no longer base their comparative

advantage on lower production costs, but on the differentiation of production and in the production of new goods. The increase in local enterprises competition and labor productivity has been possible thanks to the introduction of new technologies into the production process and the transformation of the plants' organization system.

The leading local firms are more competitive when markets change quickly (such as clothing) and a territorial or functional segmentation of demand exists. All firms are not successful in adapting to the new conditions. In those cases where firms have been incapable of achieving the necessary changes, we can observe processes of deindustrialization. Frequently however, the basic factors that have favored the start of the local industrialization process have propiciated the surge of a new industrialization process, either linked to the previous process, or not.

5. TECHNOLOGICAL CHANGE AND LOCAL INDUSTRIALIZATION

One wonders if the local industrialization model continues to be useful today? Is local development a process that can make up one of the structural change strategies of the Spanish economy? Or is it a phenomenon that has changed leaf in the past decade only to disappear in the new phase of the economic cycle?

It is no doubt rash to put forth a judgement as to the future of a process so complex as that of local development. We can nevertheless explore its future from the perspective of today's technological change. Although local industry is often shaped by labor intensive activities, local development will undoubtedly be feasible if technological progress is introduced into the system of local industry. But, are local firms capable of adopting and adapting new technologies?

The analysis of case studies of local industries shows the penetration of modern technology within the local enterprise systems. Leaving aside the

outstanding fact that the more dynamic local firms today have improved their communications systems (through the introduction of the telex or the connexion with national and international data banks). We should point out the adoption of new technologies in production processes. It should be stresses, however, that local industrialization is largely based on the adaptation of technology, and recently, even on the "creation" of modern technology.

In the Alto Deva, in Lalin, in Olot, in the villages of the province of Alicante or in Puente Genil, firms that are leaders in the machine tools, clothing, plastic extrusion, toys, shoes and industrial pastries industries have abandoned old fashioned production processes and have introduced modern equipment, often numeric control machines. If the new communication technologies have improved the accessibility of local systems, the application of the new production processes have increased labor productivity and have improved the local firms' competition within the markets.

Beyond this, in clothing manufacturing, machine tools and extrusion of plastics the plants production function is ever more closely adapted to a multi-product function system, that will allow firms diversify their products and attend different markets for several final products. Undoubtedly local firms are more efficient; but the introduction of new technologies in the production process also allows them product goods suited to customer demand. This has also given the firms a greater flexibility which makes them more profitable and more competitive.

A major question in local development is certainly the choice of technologies that will permit an efficient use of the available local resources, and at the same time, be competitive within the products market. According to Morawetz (1974) there are three possibilities: to import it from abroad through transfer of technology, generate it locally, or adapt the technology available in another area to local needs. Traditionally, local entrepreneurs have sought to use production methods from abroad, but they have often been

capable of adapting it to the local production needs by introducing small changes in the more or less modern machinery.

While visiting toy firms in Alicante, plastic transformation firms in Olot or industrial pastry plants in Puente Genil, one realizes that a large part of the machinery in the more modern plants have German, Italian or Japanese patents. Leading entrepreneurs are proud of their new equipment, and painstakingly describe how they have had to transform the organization of the production process, and even the distribution of the machinery within the plant in order to make production more efficient. The majority of local entrepreneurs, however, use foreign (as well as Spanish) machinery and production methods, often somewhat outdated, and at times even second hand.

With this same enthusiasm, however, local entrepreneurs show the machines in use, old or modern, which they or their technicians and/or skilled workers have designed or adapted. Occasionally, local firms need to fill orders for a new product, or must improve productivity in order to continue being competitive within the market and cannot change their equipment quickly enough. The lack of financial resources, the lack of information about the new equipment markets, or the need for an efficient use of local resources press them to look to themselves and their own capacity, to their own engineering know-how and so transform a piece of available machinery or equipment in the plant, or design a new one, in order to overcome the situation.

Some neo-Schumpeterian economists, on finding out that local entrepreneurs are more adaptable than innovative with respect to technology, react negatively and scorn the results obtained. My intention here is not to criticise this neo-Schumpeterian point of view, or to discuss Schumpeter's concept of the role of innovation within the economic growth process. I wish only to recall Rosemberg's (1976) emphasis on adaptation of technology in economic development processes.

We are witnessing an important change during this last decade in the behaviour of local firms in Spain, that has given rise to the creation of Research and Development Centers in local development areas, dedicated to innovation, design and quality control. Some have already achieved important results, as happens in the case of Ikerlan in Mondragón, ITEP in Mahón or Inescop in Elda, Arnedo and Inca.

The best known case is that of IKERLAN (Thomas and Logan, 1982), a cooperative of the enterprise system of Mondragón that undertakes research and development. Among their activities stands out the identification and adaptation of technologies, innovations, the diffusion of technology to the production cooperatives of the Mondragón group and personnel training for firms within the group using new technologies.

Partly financed by the Basque government, the State Administration, the Mondragón Group and by the clients themselves, its most important feature is that it develops specific projects in the fields of electronics, mechanics, data information and production systems, directly related to the specific needs of the local firms. What also stands out is the development of innovations in the field of robotics and numeric control machines.

If the need to solve technical problems and increase competition and productivity on the part of Mondragón's cooperative firms gave rise to the creation of IKERLAN, the urgency for overcoming problems related to glues and leather for the shoes exported and returned from the U.S. induced local entrepreneurs in Elda to create INESCOP. Thus began, in the late seventies, the Research and Development Center of Elda, initially financed by local entrepreneurs, and later by clients and the Ministry of Industry. Its activities have evolved from quality control of products and raw materials to the development of modern design and the creation of machinery for shoes.

In short, the evaluation of local industrialization processes with respect to the introduction of technological change within the local

enterprise system speaks for itself. The major factors of the local industrialization process (local entrepreneurship, the local communities capacity for solving their own problems, industrial culture) are ever present in local economies and push them forward to adjust their productive structure to the new conditions of the international economic system. The local enterprise systems show a capacity for developing old/new products with new technologies, and begin new activities as well. In other words, the industrial centers in rural areas may assume new functions within the international (or national) division of labor.

6. CONCLUDING REMARKS

This paper has shown that within a national economy several paths of growth can be identified. Local industrialization can become a development strategy but it will take different forms, according to the conditions of the particular local economy. The reason is that any local area is product of its own history and the new rounds of investment have different implications for different productive structures.

The Spanish experience shows that the Industrial Revolution was completed not only through the (large firms) polarized urban/industrial growth model, but also through the (small firms) diffuse rural/industrial growth model. At the present time, industrial growth continues in rural areas because local firms are able to introduce new technologies within the production processes.

The problem is to design a long-term strategy for local development. Spain cannot serve as an example, given that local industrialization took place despite the fact that the State's policies favored the traditional concentration diffusion model. In any case, we can say that the overlaping of at least two development models ask for a complex system of objectives and of policy instruments (Vázquez, 1986b).

If both these models are to shape development, the economy's system of growth objectives must change. The maximum growth objective of the functional paradigm should be submitted to the limitation of satisfying the local communities needs. Polarized development's objective should be changed for that of diffuse development. Faced with the fact of centralized, hierarchical growth, the local and regional communities potential should be fostered as well as its participation in the control of productive processes.

If the development objectives change, so too should the instruments and the agents of local development strategy change. On the one hand, only those actions focused towards the mobilization of their own resources would be valid, and therefore, to the development of the economic, sociocultural and politico-administrative dimensions of local development. This however, would mean accepting the fact that when the market mechanisms function, as happens in the case of local industrialization in Spain, it is not advisable to interfere and that the enterprises' services would be promoted and managed by the entrepreneurs themselves.

This does not erase, however, the responsibility of public institutions. As Coffey and Polesi (1985) point out, public involvement is necessary for the preparation of the institutional and economic environment that allows endogenous development to begin in the areas, stimulating local entrepreneurship through social animation, information and financing.

BIBLIOGRAPHY

ARACIL, R. and GARCIA-BONAFE, M., 1978
"Industria Domestica e Industrialización en España"
Hacienda Pública Española, Nº 55, pp. 113-129. Madrid.

CARANDE, R. 1977
"Carlos V y sus Banqueros"
Barcelona, Grijalbo Editors.

COFFEY, J.W. and POLESE, M. 1985
"Local Development: Conceptual Basis and Policy Implications"
Regional Studies, vol. 19.2 pp. 85-93. Madrid.

CROUZET, F. 1975
"Quelques Problemes de l'histoire de l'industrialisation an XIX^{e} Siecle"
Revue d'Histoire Economique et Social, vol. 53 pp. 526-540. Paris.

ESTUDIOS TERRITORIALES, 1984
"Industrialización Local en España"
Nº 13-14, Madrid.

FRIEDMAN, J. and WEAVER, C. 1979
"Territory and Function"
London. Edward Arnold.

FUA, G. 1980
"Problems of Lagged Development in OECD Countries. A Study of Six Countries"
OECD, Mimeo. Paris.

FUA, G. 1983
"L'Industrializazione nel Nord Est e nel Centro"
In: "Industrializzazione senza Fratture". Ed. Fua and Zachia
Bolonia, Il Mulino.

GORE, C. 1984
"Regimns in Question"
London. Methuen.

GUINDANI, S. and BASSAND, M. 1982
"Maldeveloppement Regional et Indentite"
Lausanne, Presses Polytechniques Romandes.

INSTITUTO del TERRITORIO y URBANISMO, 1986

"Areas Rurales Españolas con Capacidad de Industrialización Endogena"

Mimeograph, MOPU. Madrid. Research carried out by CEAM.

MENDELS, F. 1984

"Des Industries Rurales a la Protoindustrialisation: Historique d'un Changement de Perspective"

Annalles, E. S.C. 39e annee, Nº 5 pp. 977-1008.

MENDELS, F.

"Protoindustrialisation: Theory and Reality. General Report"

Mimeo. University of Maryland. U.S.A.

MORAWETZ, D. 1974

"Employment Implications of Industrialization in Developing Contries: A Survey"

The Economic Journal, Sept. pp. 491-542.

NADAL, J. 1973

"The Failure of the Industrial Revolution in Spain 1830-1914"

In: The Fontana Economic History of Europe. "The Emergence of Industrial Societies - 2" Ed. Cipolla, C.M.

Fontana/Collins, 1975.

PERPIÑA GRAU, R. 1936

"De Economia Hispana"

In Perpiña Grau, R. "De Economia Critica"

Valencia, Institución Alfonso el Magnanimo, 1982.

ROBERT, J. 1982

"Mobilising the Indigenous Potential of Disadvantaged Regions: A new Dimension of Regional Planning"

European Regional Planning Study, Nº 40

The Council of Europe. Strasbourg.

ROSENBERG, N. 1976

"Perspectives on Technology"

Cambridge University Press.

SACHS, I. 1980

"Strategies de l'Ecodeveloppement"

Ed. Economie et Humanisme. Les Editions Ouvrieres. Paris.

SACHS, I. 1983

"Le Potentiel de Developpement Endogene"

Economies et Societés.

STÖHR, W. 1981

"Development from Below: The bottom-up and Periphery-Inward Development Paradigm"

In: Stöhr and Taylor, D.R.F., ed. 1981

STÖHR, W. 1985

"Selective Selfreliance and Endogenous Regional Development"

In: Ungleiche Entwicklung and Regional Politik in Südeuropa

Ed. Nohlen and Schultze

Bochum, Studienverlag Dr. N. Brockmeyer

STÖHR, W. and TAYLOR, D.R.F. 1981

"Development from Above or Below? The Dialectics of Regional Planning in Developing Countries"

Chichester, J. Wiley and Sons Ltd.

TORTELLA CASARES, G. 1975

"Los Origenes del Capitalismo en España"

Madrid. Technos Ed.

TUÑON de LARA, M. 1961

"La España del Siglo XIX"

Barcelona, Laia Ed.

THOMAS, H. and LOGAN, C. 1982

"Mondragón: An Economic Analysis"

London. Allen and Unwin

VAZQUEZ-BARQUERO, A. 1983

"Industrialization in Rural Areas"

OECD Inter-governmental Meeting, Senigallia, June.

VAZQUEZ-BARQUERO, A. 1984a

"El Estado Frente a los Problemas del Desarrollo Local"

Estudios Territoriales, Nº 13-14, pp. 127-138. Madrid.

VAZQUEZ-BARQUERO, A. 1984b
"Politica Regional en Tiempos de Crisis"
Estudios Territoriales Nº 15-16, pp.21-32

VAZQUEZ-BARQUERO, A. 1986a
"Transformation of the Industrial System in Spain"
In: Industrialization in Developing and Peripheral Regions,
Ed. I.F.E. Hamilton, pp. 114-135. London. Croom Helm.

VAZQUEZ-BARQUERO, A. and HEBBERT, M. 1986b
"Local Development and Regional State in Spain"
Paper read at the RSA XXVI European Congress
Cracow, Poland. August.
To be published in the European Papers of the Regional Science Association.

AGRICULTURAL FUNDAMENTALISM:

A Review of Economic Thought and Development Strategy

D.L.NARAYANA
Emeritus Professor of Economics
Sri Venkateswara University
Tirupati

1. Meaning of the Concept

Anything fundamental constitutes the foundation, basis or groundwork of a system. Accordingly agricultural fundamentalism asserts that agriculture is the foundation of all economic activity. It also assumes that the quality and character of population depends on its rural origins. As such it represents a school of thought with a specific philosophy. Its logical policy implication is the advocacy of the interests of farms and farmers. In the context of economic planning, it stands for first priority to develop agriculture and to promote rural prosperity. The interests of farms and farmers constitute a dominant viewpoint for evaluating various social problems. The concept encompasses all issues of the rural people. All theories that originate from agricultural factors postulating the importance or superiority of rural life constitute the doctrines of agricultural fundamentalism.

Agricultural fundamentalism has a number of basic ideas. Its economic fundamentalism has been succinctly stated on the seal of the United States Department of Agriculture:

self-reliant and self-employed. It is also argued that farming is a divine calling. God and man work together to meet the physical needs of mankind. In the words of Jefferson, "Farmers are the chosen people of God." To Jefferson, the cultivators of land were the most valuable citizens, they were "the most vigorous, the most independent, the most virtuous, and they are tied to their country, and wedded to its liberty and interests by the most lasting bonds."[1]

Moreover, farmers constitute a bulwark for social stability. They are assumed to be more industrious, less greedy and un-sophisticated. As they are less ambitious, they lead a contented life. With their typical sense of contentment, cheerful natural environment, self-sufficiency, and close-knit happy family life, they are relatively immune and invulnerable to the appeals of radicalism, revolution, foreign ideologies and violence. As contrasted with the life of the hunter, nomad and city-dweller, farming life is considered to be the ideal human condition and the farmer's influence will be dominant in the best-ordered society. It is well-known that agriculture represents not only a predominent occupation of people in underdeveloped countries but also a culture by itself firmly rooted in the institutional set-up.

---

1. "Journal of Farm Economics", Vol.XLIV 1962, p. 1205.

The ideas which formed the intellectual and emotional bases of agricultural fundamentalism have deep roots in human history. For, mankind throughout most of its existence has been either pastoral or farm people earning livelihood directly from earth. The shift to industrialism and urban living is of recent origin, almost a current development when considered in the correct historical perspective.

2. The Physiocrats

The physiocratic doctrine constitutes the begining of agricultural fundamentalism. The physiocrats discarded the mercantilist belief that wealth and its increase were due to exchange. They transferred to the sphere of production the power of creating wealth and the surplus which might be available for accumulation. The central point of their analysis was the search for this surplus and they formulated three basic tenets.

The first principle of physiocracy is that agriculture is the only productive industry and consequently the source of all wealth for the economy. Agriculture is only capable of creating a surplus, for the labour employed therein produces more. The amount of food consumed by the worker plus what is used as seed is on the average less than the amount of produce raised from the ground. Hence the labour in agriculture is only productive, all the other labour employed

in industry and commerce is sterile because they produce no net product, but only change the form or the title to the wealth produced by agriculture. According to Turgot, "What the agriculturist's industry causes the earth to produce beyond his personal wants is the only fund for the salaries which all the other members of the society receive." It means that the number of those engaged in industry and trade depended ultimately on the amount of subsistence which those who worked on the land could raise above their own requirements. The degree of higher productivity of labour which made surplus possible made its appearance in agriculture and this surplus is a gift attributable to the productivity of nature and not to the productivity of labour.

The second tenet of physiocracy was the beneficient role of natural order. Agriculture is in accordance with natural order deriving the fruits of earth as given by God, whereas the products of the art are made by man who is powerless to create. Physiocrats believed that human society is so ruled by natural laws that state-craft cannot alter the operation of those laws under any circumstances. The laws established by a benevolent providence for the good of mankind were so clearly evident that it should require only a little reflection to recognize them. The essential aspects of natural order were the right to enjoy the benefits of property, to exercise one's labour and to follow one's self-interest.

The third principle of physiocracy is laissez-faire policy that state should not interfere with economic activity. As agriculture only created surplus value in conformity with the benevolence of nature, any interference with the natural order will lessen its contribution. Economic liberty is necessary for agriculture to encourage the production of surplus which makes a prosperous economy possible. Thus free trade within a nation and between nations is required. Any state intervention to promote industry or commerce will not be fruitful as those sectors do not produce a surplus, it only makes production more cumbersome and less economical. Hence intervention in any form is not desirable and it must go. Physiocracy was indeed a French revolt against Mercantilism, emphasising raw produce or real wealth against money wealth, a reaction against the abuses of State interference advocated by mercantilists.

3. Adam Smith

Although it is difficult to assess the exact impact of physiocrats on Adam Smith, the father of political economy, according to Cliffe Leslie, the three fundamental conceptions: (a) that of natural rights, (b) that of a beneficient providence, and lastly (c) the idea of laissez-faire derived from the doctrine of self-interest and the reaction against government interference "formed the groundwork of the political economy of Adam Smith and physiocrats".[2] In view of the essential

---

2. Haney, L.H.; History of Economic Thought, 1949, p.212.

similarity in the political and economic climate in which Adam Smith and the physiocrats lived, it is not surprising to find that the general outlook of Adam Smith was not essentially different from the views of the founders of the French political economy.[3] Smith's application of naturalism, his optimism in the role of invisible hand and his attack on mercantilism made him a greater champion of laissez-faire than the physiocrats. Adam Smith stated that it was a mistake to retard commerce and industry for the sake of agriculture. Consequently, agriculture did not occupy the specially exalted position which it enjoyed in physiocracy. Nevertheless, Adam Smith considered agriculture as more productive than commerce and industry, because the forces of nature labour along with men. Although he advanced the physiocratic principle of laissez-faire, he believed that this would result in competition between small entrepreneurs. The physiocrats were in favour of large-scale farming on the argument that it was more efficient and productive.

Adam Smith indulged in the contrast of natural generosity of farmers with the ugly self-interest of those engaged in commerce and industry, in spite of his belief in the principle of self-interest as the fundamental force of society and as the chief motive in life. He also agreed that investment in

---

3. Eric Roll: "A History of Economic Thought", p.144.

agriculture was quite in accord with the general interest of society. Moreover, he stated that agriculture was the most productive industry. Hence, he may be considered to be an agricultural fundamentalist, although his economic policy proved to be more conducive to the rising industrialism in view of the contemporary economic situation.

4. Thomas Robert Malthus

The Malthusian doctrine also represents agricultural fundamentalism as it postulated that food and agriculture are the crucial and controlling elements in the economy and society. It befell a hitherto unknown English clergyman, T.R.Malthus, to force the attention of the world upon the population problem as a reaction against the optimism of physiocrats who saw a great natural asset in an increasing population and Adam Smith who was interested in a large population. On the basis of his enquiry Malthus was forced to conclude that population has a tendency to increase in geometric ratio, whereas food production has a tendency to outstrip the productive power of the economy. Therefore, population is necessarily limited by means of subsistence; if the means of subsistence increase, population increases. The problem of excess population will be obviated either by positive checks like wars and famines raising death rate or by preventive checks like moral restraint and vice by reducing birth rate. Malthus thought

that the only means of keeping population within the limits of subsistence were vice and misery and thus he projected pessimistic outlook reversing the old optimism. The real basis of the population theory was the assumption of diminishing returns in agriculture. Turgot's statement that a doubling of the capital invested in agriculture would not double the yield was understood as a law peculiar to agriculture. As population increases, food production must be increased either through extensive cultivation or intensive cultivation. In either case, cost of production will increase due to the diminishing returns. Hence, the difficulty of providing subsistance to a growing population is obvious.

While the population theory gave rise to much controversy, credit goes to Malthus for bringing population problem within the field of social science and for being the real father of modern population study. He drew pointed attention to the fundamental bottleneck of food production in relation to population growth which is now pestering several underdeveloped countries in the world. If physiocracy is a positive assertion of agricultural fundamentalism, Malthusianism constitutes a negative exaltation of the same doctrine. Indeed, Malthus was an advocate of feudal interests. Malthus also argued that landlords are an asset to the economy as they facilitate effective demand for goods and services and avoid the onset of gluts.

5. David Ricardo

Although David Ricardo, friend and contemporary of Malthus, was more Malthusian than Malthus himself in the application of the principle of diminishing returns to agriculture and the law of population change, focussing attention on the increasing cost of foodgrains as a historical law, acquitted himself as an industrial fundamentalist. Ricardo's treatise on political economy was essentially an analysis of agricultural economy with a passionate plea for the solution of obstacles arising from that sector to the growing industrialism. As population increases, the demand for foodgrains increases. But the law of diminishing returns pushes up the cost of food production. Consequently prices rise, wages rise, industrial profits fall, capital formation slows down, stationary state occurs. Free trade and repeal of corn laws as advocated by Ricardo facilitate cheap import of foodgrains, lower cost of subsistence, lower wages and higher industrial profits, greater capital formation and rapid progress of industrial economy

Although Ricardo, the businessman economist, was aware of the possibilities of scientific progress in agriculture, his emphasis on the Malthusian principle of population and the intractable law of diminishing returns in agriculture forced him to infer that stationary state becomes inevitable in view of the increasing cost of subsistence involving a chain reaction

in the economy. It means that agriculture constitutes the cause of economic stagnation. Thus Ricardianism reversed the physiocratic optimism and the doctrine of agricultural fundamentalism and projected the primacy of industrialism which has been asserting itself by facilitating economic growth in contemporary England.

Even Adam Smith was not a dogmatic adherent of agricultural fundamentalism. He agreed that it was a serious mistake to retard commerce and industry for the benefit of agriculture. In U.S.A. Alexander Hamilton was the earliest and the most outspoken critic of the primacy of agriculture. In his famous "Report on Manufactures" which appeared in December, 1791, Hamilton conceded that farming was of first importance, but that it should not be pushed to the exclusion of industry. He argued that there were some distinct advantages in employing labour in manufacturing and he held that agriculture would actually benefit from the development of industry. Hamilton was one of the early promoters of the idea that agriculture and industry were mutually beneficial to each other and to the country. The advent of Industrial Revolution in England and its spread to other countries has established the superiority of industry over agriculture. With its echo in the Ricardian political economy, it gave a decisive blow to the economic doctrine of agricultural fundamentalism. Industrial Revolution has gone a long way to establish the economic inferiority of

agriculture. Nevertheless, agricultural fundamentalism survives in its social, cultural and political aspects.

6. Frederic List

Frederic List (1789-1846) was an ardent advocate of industrialization based on tariff protection. The impact of his doctrines is still quite dominant, although his monumental work, "The National System of Political Economy" appears to be "very largely a tract for the times issued for the encouragement of the Germany of List's day."[4] List's ideas were similar to those of Hamilton. It is the contemporary conditions and the industrial success of America and Germany that inspired him to advocate protection to facilitate industrial development and revise Adam Smith's theory of Laissez-faire.

According to List, manufacturers were the most important of all the productive resources of a nation, because they develop the moral forces of a nation in a lasting way. For, "The spirit of striving for a steady increase in mental and bodily acquirements, of emulation and of liberty, characterise a state devoted to manufacture and commerce.----- In a country devoted to mere raw agriculture, dullness of mind, awkwardness of body, obstinate adherence to old notions,

---

4. Alexander Grey: "The Development of Economic Doctrine", p.228.

customs, methods and processes, want of culture, of prosperity, and of liberty prevail."[5] Industrialization promotes human capital "the sum total of human legacy as incorporated in our national life" To quote him, "The present state of the nations is the result of the accumulations of all discoveries, inventions, improvements, perfections, and exertions of all the generations which have lived before us; they form the mental capital of the present human race, and every separate nation is productive only in the proportion in which it has known how to appropriate these attainments of former generations and ~~the~~ increase them by its own acquirements." Manufactures and commerce promote knowledge, human capital, the strength of human character and enhance productive powers.

According to List, economic evolution takes place in five stages. A country has to pass through the five stages of development, namely barbarism, pastoral stage, agricultural manufacturing stage and agricultural-manufacturing-commercial stage. List's main concern was with the last three stages. He advocated that a country should adopt such a policy which may help its development from lower to a higher stage, i.e., from the purely agricultural to the agricultural manufacturing stage and then to the agricultural-manufacturing-commercial stage.

---

5. Ibid., p.231.

He believed that the agricultural stage was definitely inferior as compared to the next higher stages. He emphasized repeatedly that it is only with the prosperity of manufacturers, that navigations, internal and external trade and agriculture flourish. A purely agricultural country cannot carry on the division of operations among its inhabitants and it may only be able to have hardly one-tenth of the material wealth which a perfect nation can produce. List was very optimistic and he said that a country which introduces manufactures at the proper time, agricultural and industrial productive power will help in promoting each other. He has compared a nation wholly dependent on agriculture with an individual who lacks one arm. He asserted that manufactures are "the offsprings and at the same time, the supporters and the nurses of science and arts." Industrialization speeds up the stages in economic evolution and advances economic development.

Protection is a crucial weapon through which a nation can reach a higher stage of development from a lower stage. Although it is a panacea for several ills, it cannot be universally applied to every country and in every period to all the industries. The protection system can only be justified when its aim is to impart industrial education to a nation. Hence it is not applicable to a highly industrialized country.

It is only those nations which are facing competition at the hands of powerful industrial nations that can utilise it with advantage. "The reason for this is the same as that when a child or a boy is wrestling with a strong man can scarcely be victorious or even offer a steady resistance." Protection should not be extended to agriculture, for the agricultural prosperity itself depends on industrial prosperity, while the increase in prices of raw materials or food would prove detrimental to the development of industry. Thus, List postulated the infant industry, infant country and discriminating industrial protection over a period of time.

Hence, List was not a wholesale protectionist. According to him, a country must adopt free trade in the earlier stages. After achieving agricultural prosperity, a country must promote manufactures, fisheries, navigation and foreign trade by adopting a policy of tariff protection and in the last stage they may again go back to free trade. Free trade could exist only among equals. List was quite aware of the sacrifices involved in protection. He fully realised that a nation will have to forego present advantages to ensure better future. Since the sacrifices are made good by several times, they are to be regarded as productive investment for the whole nation.

7. Agriculture versus Industry in Underdeveloped Countries

If it is a case of sheer economic comparison of modern industry with traditional agriculture, the qualitative superiority of industry over agriculture is quite clear. Industry[6] is associated with higher standard of living, economic prosperity, higher level of per capita income, higher level of productivity, better skill, training, education and inventiveness, more stable and favourable terms of trade, better linkage effects, and the most frequent source of leading sector and economic take-off.

Although agriculture accounts for bulk of the employment and national income in underdeveloped countries, it is associated with low per capita income. In advanced countries per capita income is approximately ten times higher than the per capita income in the underdeveloped countries which account for nearly two-thirds of global population. Poverty of the world is mainly associated with low income derived from agriculture. It means that not only most of the people of the world are miserably poor, but also most of them eke out a meagre livelihood from agriculture. Thus poverty and agriculture are so closely associated as to be considered almost inseparable.[7]

---

6. "Entrepreneurship and Agricultural Development" by D.L.Narayana, pp.86-91. - Indian Institute of Asian Studies, Bombay, 1966.

7. Ibid., p.82.

The economic inferiority of agriculture prompted the developing economies to give higher priority for the development of industry in their programmes of planned development. Leaders in the underdeveloped countries immediately after the Second World War in the wake of their getting independence aspired to obtain rapid industrial development for achieving economic security, retrieving the old colonial inferiority and obtaining political security against imperialism. The feelings of colonial exploitation, arrested industrial development, economic inferiority of people as hewers of wood and drawers of water have gone a long way to alter the pattern of priorities in favour of large-scale industrialization in the underdeveloped countries. Consequently "agricultural fundamentalism has had virtually no appeal in weak and underdeveloped nations"[8] during this current century. John H. Adler, Director of the Economic Development Institute of the World Bank in his critical review of the lessons of development comments: "One of the reasons for the neglect of agriculture, and of misunderstanding of the role which agricultural production must play in the development process, is that the leaders of many underdeveloped countries under-estimated the importance of agriculture and therefore tended to misunderstand the emphasis placed on it by

---

8. "Journal of Farm Economics", Vol.XLIV, 1962, p.1225.

development experts from advanced countries. Some people in developing countries seemed even to resent this emphasis as forming some sort of a conspiracy to keep the underdeveloped countries tied to their farms and plantations, leaving industrial production to the more advanced countries. This is nonsense, just as it is nonsense to think of economic development simply as a process of industrialisation."[9]

8. Changing views[10] on the role of Agriculture in Economic Development

The programmes of planned development in underdeveloped countries gave rise to the controversy, agriculture versus industry among the development economists, apart from the views held by leaders in those countries. Agriculture received increasing attention not only as regards the ways to increase farm productivity but also as regards its place in economic development involving institutional, structural and sectoral changes.

During 1950s most of the development economists held that industrialization is essential for the rationalization of agriculture to shift the surplus rural manpower to the growing

---

9. "The Fund and Bank Review: Finance and Development", Vol.III No.3, September 1966, p.162.

10. "Agriculture in Economic Development" by Laurence W.Witt. "Journal of Farm Economics", Vol.47, No.1, Feb. 1965.

industry which plays the most dynamic role in economic development. Most of the underdeveloped countries are considered to be over-populated possessing about 25 percent of surplus manpower in agriculture where the marginal product is considered to be zero. Hence the development economists argued that underdeveloped countries must embark upon a programme of rapid industrialization. Economists who subscribed to this line of thought include Leibenstein, Hirschman, Rosenstein Rodan, Gunnar Myrdal, Prebisch, Higgins and Mahalanobis. Although all of them emphasized the growth of industry some of them have also indicated the need to develop agriculture.

A second line of thought considered that agricultural development to provide a reliable food surplus is a fundamental prerequisite for economic development. It was argued that several advanced countries like England and countries of Western Europe had experienced agricultural revolution before the onset of industrial revolution. Consequently they had either domestic food surplus or easy access to food imports supported by the exports of manufactures as in the case of England. Russia had some initial food surplus, but having neglected further agricultural progress, now faced an important agricultural crisis in spite of its remarkable industrial development.

Over-populated countries like China and India are also forced to face food crisis for neglecting agriculture. Communist China [illegible] attempted to solve the food problem by drastic

measures at the severe cost of personal liberty. It realised now the importance of achieving agricultural surplus. India without solving the problem of food deficits embarked on industrialization for which it has paid the price in terms of acute food crisis and social unrest and it is now trying to give top priority for food production since the Fourth Plan. The available experience of developed and developing countries proves that agricultural surplus over consumption is a prerequisite for economic development. But achieving food surplus is not development. There are several small East Asian countries with food surplus, but did not get industrialized or developed. Economists like Viner, Rostow, Coale, Hoover, Kuznets and Oshima advocated first priority for food production in development programmes of underdeveloped countries.

A third view is that agriculture is an intimately interrelated sector in the process of economic development. Agriculture has a role to play, but so do other sectors like industry and commerce. Several factors caused concern about food and agriculture. The decline of agricultural exports as a consequence of increased domestic consumption, increasing foreign exchange gap in the wake of development effort, accelerated growth in population due to dramatic decline in death rate, increasing food deficits led to a fresh evaluation of the role of agriculture. T.W.Schultz and Doreen Warriner have

repudiated their earlier acceptance of the notion of surplus manpower and zero marginal product of agricultural labour. Schultz formulated that investment of new types of inputs are required both in agriculture and industry and traditional agriculture constitutes a great bottleneck for development effort. Other economists associated with balanced growth are Ragner Nurkse, Lewis, Nicholls, Johnston and Mellor. It may be noted that balance is defined as a growth process in which demand-supply relation maintains a sustained balance without either inflationary or deflationary pressures. It means that domestic agriculture has to make a significant effort to produce the required quantity of foodgrains in harmony with the growth of population and general economic development. Consequently the contribution of domestic agriculture to economic growth may be neutral and it may not acquit itself as a leading sector. It meets only one of the required conditions of economic progress.

9. Population explosion and food production

Under-estimation of population growth and its food consumption needs led to the comparative neglect of agriculture in the past. Due to scientific and medical revolution, the death rate has been experiencing a dramatic fall in underdeveloped countries during the post-war period. The United Nations estimated that the annual growth rate of the world population to be about 1.33% during 1950-1980. The recent

revised estimate shows that it has already reached the level of 2.0 percent per year by 1965 and it constitutes an explosive[11] growth rate. As birth rate is likely to be normally stable, and death rate shows a tendency towards a rapid decline, the growth rate of population increases progressively.

The United Nations medium level projections reveal that the population of the world which was 2960 million in 1960 will increase to 6360 million in 2000. It will go up by more than 100 percent within a period of 40 years. It is also estimated that the food production which was about 470 million tons in 1960 must rise to 1215 million tons to feed the population with a per capita increase in consumption by about 20 percent. It means that the food production must increase by more than 170 percent during the 40 years.

Actually the agricultural situation is changing every year and generally it is not encouraging. The Director-General of Food and Agricultural Organisation in his foreword to "The State of Food and Agriculture 1966" categorically points out that "any remaining complacency about food and agriculture situation must surely have been dispelled by the events of the past year". For, in the year 1965-66, the world food production failed to rise, but the world's population increased by about 70 million and most of the population growth is taking place in

---

11. Refer "Commerce" Bombay, October 15, 1966. "Population Explosion" by Dr. D.L.Narayana.

the underdeveloped countries. It implies that the human reproduction is outstripping food production. Food situation is alarming for the deficit countries, as the scope for ready imports is gloomy. Until recently, the large stocks of grain accumulated since the early 1950's largely in North America have provided a buffer against extreme emergencies to the food scarcity countries. The relief shipments have reduced the North American grain stocks to the lowest level since the Second World War. Indeed U.S.A. considers that stored supplies are below the "strategical reserve". Consequently U.S.A. is bringing back into cultivation lands which farmers were once paid to leave uncultivated. It is also revising its attitude towards the food aid creating lot of strain to the drought-ridden countries like India experiencing acute famine and chronic hunger in certain parts of the country.

As India's population is increasing by about 2.5 percent per year, it does not take more than 30 years to double its population. If the current trends of fertility and mortality are allowed to continue, India's population will be substantially more than 1000 million by the turn of the century creating colossal problem of feeding and clothing.

The perspective planning in India has seriously underestimated the rate of population growth. The First Five Year Plan assumed a growth rate of 1.25 percent per year for the Second Plan period and 1.33 percent per year for the Third Plan

period. The actual average growth rate during the 1951-61 decade has been 2.2 percent. The Second Plan projection estimated the population of India to be about 500 million in 1975-76 by the end of the Fifth Plan. The actual population was more than 600 million. Thus, India's population growth is ahead by about ten years as against the plan projections.

The population explosion meant greater demand for foodgrains. As the local production is not adequate to meet the needs of population, India has been importing progressively increasing quantity of foodgrains from foreign countries in spite of the expansion of the food production through plan efforts. India's net food imports increased from 4.8 million tonnes in 1951 to 5.13 million tonnes in 1960 and to about 7.45 million tonnes in 1965. Production of foodgrains has indeed gone up from 54.9 million tonnes in 1951 to 89.0 million tonnes in 1964-65 and 72.3 million tonnes in 1965-66, an unusually bad year. While there has been substantial increase in food production during the 15 years of planning it has been fluctuating and it falls short of the national requirements in view of increasing demand and rapidly growing population. Actually, India was facing a grave food crisis which is also being experienced in other developing countries. India failed to achieve self-sufficiency in foodgrains in spite of the planned development. The experience of the Third Five Year Plan amply proved, that unless there is self-sufficiency in

food grains, economic, social and political stability will be in precarious balance as the recent events illustrated. Rightly the Fourth Plan is striving to give top priority to agriculture. Hence, the underdeveloped countries have to achieve self-sufficiency in food production by giving the necessary priority taking into account the population explosion which is not a little source of complication. Accordingly, underdeveloped countries have to emphasize balanced growth of agriculture and industry in the strategy of their planning. "One of the lessons of the events of the last 10 or 20 years is that economic development does not mean industrialization alone but demands an expansion of agricultural production and many other things as well"[12]. The Indian experience postulates that unless its food production increases at least by a minimum of 5 percent annual cumulative growth rate, self-sufficiency will not be within reach. Thus, population explosion reinforces the economic doctrine of agricultural fundamentalism in underdeveloped countries to-day.

10. Over-Urbanization and Unemployment

Population explosion which crystalised in underdeveloped countries around 1950s in turn gave birth to the problem of rapid growth of work force seeking employment by 1970s The lag in the growth of employment opportunities in the development plans of underdeveloped countries to cope with the

12. J.H. Adler: "What have we learned about Development"?, in "The Fund and Bank Review: Finance and Development". pp.162, Vol.III No.3, September 1966.

rapidly growing work force and educated manpower postulated the emergence of serious unemployment problems raising basic questions as regards the strategy of development planning which emphasised capital accumulation and industrial growth as the means of successful economic development in the post-war period right up to 1960s. Modern industrial growth was expected to serve the domestic market and absorb the surplus rural manpower in the urban economy. It was also expected to facilitate considerable achievement of economic self-sufficiency. Unfortunately, according to Todaro, "the failure of modern urban industries to generate a significant number of employment opportunities is one of the most obvious failures of the development effort over the past two decades."[13] The Third World Countries experienced rising urban unemployment ranging from 10 to 25 percent in the modern sector not only in the labour-surplus economies of India, Pakistan and Egypt but also in many African countries like Ghana, Zaire and Kenya where population explosion was less visible.

While manufacturing output increased at the rate of 6 to 10 percent, employment increased at a low rate of 1 to 3 percent per annum. Consequently the emerging unemployment problem in these developing countries with their social and

---

13. Micheal P.Todaro: "Economics for a Developing World", Longmans Group, London, 1977, p.205.

political implications are quite alarming in view of their population pressure. This type of unemployment crisis was relatively absent at the time of industrialization of either England or Germany during nineteenth century. The unskilled labourers released from rural areas could find employment in labour-intensive industries. Urbanization and industrialization were synonymous and harmonious. This historical model is quite conspicuous by its absence in the developing countries during the later half of twentieth century on account of a higher rate of urbanization over the rate of industrialization.

The underdeveloped countries are experiencing over-urbanization. In almost all the developing countries the percentage of population living in urban centres greatly exceeds the proportion engaged in manufacturing. For instance, the ratio of population living in towns of Brazil was 50 percent as against the employment of 18 percent engaged in manufacturing industries. India had an urbanization rate of 24 percent as against 11 percent engaged in secondary sector. Thus, overurbanization represents spatial mal-distribution of population in favour of urban centres.

The prime cause of over-urbanization is the accelerated rural-urban migration accounting for high rates of urban population growth. In many African cities, urban growth rates of 7 to 10 percent per annum are not uncommon and they are unlikely to decline in the coming decades. Even in India,

urban growth rate of population is more than double that of rural population growth for the country as a whole. In the case of cities, the growth rates are far higher confirming the international trend in the underdeveloped countries.

Apart from the social and cultural factors, the economic background of the rural people explains the upward trend of the rural-urban migration in the underdeveloped countries where millions of people in villages are caught up in downward spiral of underemployment and underdevelopment Deterioration in rural conditions is quite visible in India, Indonesia and African countries. Under the increasing pressure of population and work force in a situation of limited scope for extensive cultivation, cumulative sub-division and fragmentation of land under cultivation, the emergence of private property, the rise of commercial agriculture, the spread of Green Revolution and the growth of money-lending in the LDCs contributed to the rise of large land-owners on one side and the demise of small peasant proprietors and the increase of landless agricultural proletariat on the other.

The prime consequence of over-urbanization is increasing unemployment in the towns and cities which received impetus for growth under the development strategy followed in the Third World Countries as noted earlier. Growth in industrial employment did not keep pace with growth in industrial

output. Hence "it would be totally unrealistic to rely on accelerated industrial growth to solve the problems of growing unemployment, even if such growth could have a substantial labour-saving bias."[14] In view of the high capital-intensity of industrial employment, urban job creation cannot be an effective solution for the urban unemployment problem, which consists of a considerable proportion of the educated unemployed. "Indeed the emergence of the phenomenon of the educated unemployed in many developing countries is calling into question the appropriateness of massive quantitative expansion of educational systems especially at the higher level."[15]

In the case of India, "the growth rate of higher education in planning era is four times over the previous times. The scenario of higher education is one of deteriorating quality, poor training and standards. Universities produce human capital, Much investment has gone into the development of University education. Instead of turning out human capital they are training manpower without discipline and standard. The human capital appears to me as human chaos. The starving graduate and starving post-graduate for the job of a postman are neither a good index of educational system nor of manpower

---

14. Ibid.,
15. Ibid., p.225.

planning. The quality of the human capital varies over such a wide range that it is more a quantitative stock rather than qualitative manpower to monitor the work of development."[16]

The unemployment problems in the urban and rural areas of underdeveloped countries are quite heterogenous and complicated. Their dimensions and diversities are quite challenging. "The most fundamental and promising attack on employment problems in developing countries is in efforts to redress the present urban bias in development strategies."[17] It necessitates greater emphasis on rural development to arrest the upward trend of rural-urban migration. Change in the strategy of development planning may not go a long way to solve the diverse unemployment problems in the underdeveloped countries, unless the dimension of the planned attack on the unemployment problems is quite commensurate with the size of the problems. A close examination of the situation reveals that the underdeveloped countries are in the grip of population explosion, work force explosion and unemployment explosion. Development strategy with industrial bias failed to alter the occupational structure in most of the developing economies which are experiencing stagnation.

---

16. D.L.Narayana; "Population Growth and Economic Growth", Presidential Address to the Indian Economic Association, 67th Annual Conference held at Agra, January 1985, p.30.
17. Edgar O.Edwards: "Report on Employment in Developing Countries".

According to Gunnar Myrdal, "for the next few decades- the time perspective for any realistic planning - agriculture in most underdeveloped countries must absorb by far the larger part of the expected rapid natural increase, in the first place the increase in the agricultural labour force, but also that in the national labour force."[18] "It is in the agricultural sector that the battle of for long-term economic development will be won or lost."

A detailed analysis of India's population explosion revealed that increasing size of population undermined its quality. Population explosion proved deleterious to human resource development in several ways. It induced stagnation in occupational structure without any systematic shift in favour of either secondary sector or tertiary sector. The proportion of juvenile population below 14 years in India increased from 39 percent in 1911 to 42 percent in 1981. The dependency ratio or load in India is approximately double that of the advanced countries. One thousand self-supporting persons in India support 2,500 persons as against 1,200 to 1,500 in advanced countries. Participation rate has declined in India from 48 percent in 1911 to 33 percent

---

18. "The Challenge of World Poverty", - "A World Anti-Poverty Programme in Outline", Penguin Books, 1970, p.105.

in 1981. The back-log of educated unemployed increased from 2 lakhs in 1951 to 77 lakhs in 1981. The dimension of literacy has increased from 16.7 percent in 1951 to 36.0 percent in 1981, the number of literates in 1981 was 239 million, which was more than the population of India in 1901. The number of illiterates was 446 million which was more than the population of India in 1961. Similarly, the size of population above and below poverty line in India are increasing in absolute numbers."[19] Hence, stabilisation of population is essential to facilitate the improvement in its quality and advance human resource development in the developing economies.

11. The Imperative of Rural Development

Comparative neglect of agriculture with a bias towards investment in the urban industrial sector due to the emphasis on rapid industrial development permeated development thinking during the 1950s and 1960s and even later. The share of total national investment allocated towards the agricultural sector in a sample of 18 LDCs was approximately 12 percent even though agricultural output constituted almost

---

19. Op.cit 16, pp.29-30.

30 percent of their GNP and more than 60 percent of their total employment.[20] The inadequate priority for investment in agriculture accounts for its relative poor performance in underdeveloped countries. Apart from the vast numbers engaged in the primary sector of underdeveloped countries, a vast majority almost 70 percent of the world's poorest people are also located in rural areas in subsistence agriculture. Their main concern is survival. As economic development efforts have little impact on subsistence agriculture many hundreds of millions of farm people did not get an opportunity to participate in national developmental activities. According to the critical review of M.P.Todaro, "The core problems of widespread poverty, growing inequality, rapid population growth and rising unemployment-all find their origins in the stagnation and often retrogression of economic life in rural areas."[21] If development is to take place and become self-sustaining, it will have to start in the rural areas in general and agricultural sector in particular. "There can be no national development without rural development."[22]

---

20. Michael P.Todaro: "Economics for a Developing World", 1977, p.230.
21. Ibid., p.227.
22. Ibid.

In great contrast to the rural development experience of the Third World Countries, China, which effectively isolated itself from the rest of the World since its 1949 Revolution has already successfully abolished absolute poverty, unemployment and inflationary pressure, the three problems which many underdeveloped countries failed to solve. The Chinese model of rural development based on communes differs radically from the models of rural development followed in several underdeveloped countries in Asia, Africa and Latin America. Its unique approach to rural development illustrates the conquest of unemployment, poverty and inflation in a situation of rapid population which has also been successfully controlled by bringing down annual growth rate of population to about one percent as against 2% to 2.5% of the Third World Countries.

Rapid rural development constitutes the bulwark for relief from rural unemployment and poverty facilitating balanced rural-urban economic progress. According to Francis Blanchard, Director General of the International Labour Organisation, "The main burden of development and employment creation have to be borne by the part of the economy in which agriculture is the predominant activity: that is the rural sector."[23]

---

23. I.L.O.: "Time for Transition - A Mid-term Review of the Second United Nations Development Decade", Geneva, 1975.

12. Conclusion

The French Physiocracy originated the doctrine of agricultural fundamentalism by asserting the economic superiority of agriculture against the economic philosophy of mercantilism. Adam Smith supported the doctrine without neglecting industry and commerce. Malthus postulated food and agriculture as crucial and controlling elements of the economy and society. As Physiocracy constituted a positive assertion of agricultural fundamentalism, Malthusianism amounts to a negative exaltation of the same doctrine. Ricardian political economy, based on the twin pillairs of the law of diminishing returns and the Malthusian law of population, by tracing the inevitability of stationary state to the intractable agricultural economy and by advocating free trade and repeal of corn laws, undermined agricultural fundamentalism and supported the rising industrialism. The success of Industrial Revolution in England and its spread to various foreign countries has established the superiority of modern industry over agriculture.

According to Frederic List, who summed up the virtues and advantages of manufactures effectively, industrialization utilises human capital, promotes the strength of human character, enhances productivity and productive powers and speeds up the stage of economic evolution facilitating rapid

economic development. As industrialization of undeveloped countries is impossible in a world of free trade exposing them to severe competition in markets, he postulated the case for tariff protection of industries in terms of infant industry, infant industrial country and protection over a period of time. When the countries engaged in international trade are well-developed they can indulge in free trade on equal terms. The impact of List's protection doctrine and policy is still quite predominant.

After the Second World War, several underdeveloped countries embarked on rapid industrialization to alleviate their old colonial status, to obtain economic security and to safeguard against imperialism. Consequently agriculture suffered a comparative neglect in the schemes of planned development. But the recurring food crisis has focussed attention on the importance of agricultural development in relation to population growth and emphasized balanced growth of industry and agriculture.

Development effort with industrial bias against situation of population explosion and work force explosion in underdeveloped countries resulted in the emergence of over-urbanization and serious unemployment problems. Inspite of the industrial strategy of development, occupational structure in the developing economics remained stagnant. Industrial

development failed to generate adequate employment opportunities in view of its higher capital intensity for the creation of jobs. Agricultural development has comparative advantage in the generation of employment appropriate to the rural work force. The serious unemployment problems of the developing economies postulates bias for rural development and moderation of the development of higher education. Without rural development, there is no national development. While the food crisis in the developing countries emphasized the need for agricultural development, the problems of increasing urban unemployment at rural underemployment postulate greater emphasis on rural development, which may moderate rural-urban migration. Agricultural development constitutes the core of rural development despite the different dimensions of their problems.

Analysis of the views of development economists reveals three lines of thought: (1) advocates of rapid industrialization, (2) advocates of agricultural development, and (3) advocates of balanced growth. The economic situation of underdeveloped countries postulates immediate emphasis on agriculture to achieve sustained self-sufficiency in foodstuffs and rural development to tackle unemployment problems and ultimate concentration on industry for long-term economic development. The recent trends of population explosion and

work force explosion in underdeveloped countries further asserted the need for agricultural development and rural development for highest priority in development planning. A better balanced growth[24] strategy facilitates optimum rural-urban growth and economic growth in the underdeveloped countries. Thus, population explosion has revived the old doctrine of agricultural fundamentalism in the context of planning strategy for economic development in underdeveloped countries.

...

---

24. D.L. Narayana: "Entrepreneurship and Agricultural Development", pp. 91-96.